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REAL IMPROVEMENTS

IN

AGRICULTURE,

(On the Principles of A. YOUNG, *Esq;)*

Recommended to accompany

IMPROVEMENTS OF RENTS;

In a LETTER to

READE PEACOCK, Esq;

ALDERMAN OF HUNTINGDON.

To which is added,

A LETTER to Dr. *HUNTER*,

PHYSICIAN IN YORK.

CONCERNING

THE *RICKETS* IN SHEEP.

By T. COMBER, Rector of BUCKWORTH and MORBORNE, HUNTS.

— *Labor improbus omnia vincit*, VIRG.

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TO

READE PEACOCK, Eſq;

ALDERMAN OF *HUNTINGDON.*

Buckworth, 1771,
Dear Sir, Dec. the laſt.

YOU have converſed with me on the important Subject of "Real Improvements "in Agriculture," and frequently inquired my Sentiments of Mr. *Young*'s Works in general. I have as often told you, that I think them likely to prove, when properly applied, of great Service to the Public.

Our laſt Converſation, Sir, turned on the real Improvements in Agriculture, which ought to accompany Improvements of Rent, in order to reconcile the Intereſts of Landlord and Tenant with each other, and of both with thoſe of the Public. The Lordſhip of ——— was in a Manner under the Eyes of us both; and as a conſiderable Advance of Rent is going to take Place there, and the Complaints of the Farmers, both great and ſmall, are various and loud, it was natural for me to make it the Object of my Reflections; eſpecially as I was tempted by Humanity in my late daily Excurſions (which Regard to my Health obliges me to make) through Part of that Lordſhip, to fix my At-

tention on the Scenes around me, and conſider how far the Complaints of the Farmers ſeem well grounded, how far the Faults of either Landlord or Tenant may affect the honeſt Intereſt of the other, and how far thoſe honeſt Intereſts may be reconciled.

I am not (my dear Sir) ſuch a Viſionary as to imagine that the Landlord, or even Tenants, will call you and me to their Councils: But while we are ſpying out the Faults of others, we may diſcover and correct our own. And although the Lordſhip of ——— ſhould continue as unimproved as it is, the upland Properties of ſuch as chance to read theſe Sheets, may become as much improved as your *White-hall* in the Fens is.

You know, Sir, that ———, although an old incloſed Lordſhip, is almoſt as capable of real Improvements as tho' it were an unincloſed one; the Incloſure having effected little more than a few *in* Hedges, and the laying-down of a few Corn-Fields to Meadow; the Paſtures univerſally continuing in the forlorn Condition which they had almoſt a Century ago; a ſlight Advance of Rent not putting either Landlord or Tenant on real Improvements.

You and I, Sir, are not *intereſted* but *unprejudiced* Perſons, and therefore likely to hit on the Truth betwixt Landlord and Tenants in this Survey of that Lordſhip, which I here propoſe to you.

I ſhall recommend to you ſuch real Improvements as Mr. *Young* has propoſed to the Public

Public * on each Head of Examination, and ſuch additional Particulars as my own Obſervation and the Circumſtances of this Country ſuggeſt.

Survey and Map.

THE firſt Head of Complaint which the Tenants of the Lordſhip of ——— make, is, that their Landlord has not cauſed any actual Survey of his Manor, and a Map founded thereon, to be made. They affirm (and I do not hear the Aſſertion contradicted) that there is extant only one very old and very imperfect Survey, which deſcended with the Eſtate to the preſent Lord from his Anceſtor; that it exhibits Contents greatly ſuperior to the *real*, even in ſome Inſtances to double the Quantity; ſo that (if this Fact be true, which I have heard averred before this Advance was ſuſpected by the Tenants) the old Survey muſt have been formed by ſome very iniquitous Perſon, to anſwer ſome particular bad Purpoſes, probably in conſequence of Bribes.

According to this Repreſentation, it is impoſſible that the preſent Advancer of the Rents ſhould know the real Quantity of the Ground.

Another very principal Head of Complaint of the Tenants is, that the preſent Advancer of Rents is neither the ordinary Steward, who may

* See his Farmer's Letters,—his Farmer's Guide,—his Courſe of Experimental Agriculture,—and his ſeveral Tours, &c,

be ſuppoſed to know the various Values of the Soils in that Lordſhip, nor a Perſon who has examined and minuted the various Values, and in conſequence of knowing by the Map the Quantity, and by Examination the Quality of the Ground, has properly apportioned the advanced Rent; nay, nor one who has advanced the Rents in conſequence of employing any experienced Man thus to value; but that he has raiſed them in a certain random Proportion of the old Rent. If theſe Facts be true, (as I apprehend they are) the Impropriety of Advance of Rents ſeems on theſe Accounts to be inconteſtible.

I muſt not finiſh this Head of Reflexion without obſerving, that there is ſcarcely a more execrable Species of Villainy than that of a falſe Surveyor, who to gratify ſome paltry Intereſt or bad Paſſion, (perhaps Revenge) gives in a partial Map, and thus makes a Landlord who is humane, an actual Oppreſſor, and deprives the Tenants of all juſt Means of judging of the real Value of their Farms till it is too late, and they learn their Oppreſſion and Injury by the Effects.

Various Sizes of the Farms.

A THIRD very principal Head of the ſmall Tenants' Complaint is, that the Advancer of their Rents has paid no Regard to the various Sizes of their Farms, (from 300 *l. per Ann.* down to 6 *l.*) but has, almoſt indiſcriminately, raiſed all of them One-fourth, or five Shillings in the Pound. Now theſe ſmall Farmers complain, that if all Farms be ſuppoſed (as they may reaſonably)

reaſonably *) valued at an equal Rate in the old Rents, the large ones can better bear an Advance of One-third than the ſmall ones of One-ſixth. I am, Sir, myſelf no Advocate for ſmall Farms, as originally planned, becauſe they commonly ſpoil a good Day-Labourer or Mechanic; but when they are actually allotted, and have been enjoyed, perhaps a Century by the reſpective Poſſeſſors' Families, I think it obvious, that either, 1ſt, very ſmall Farmers muſt be diſmiſſed; or, 2dly, if Humanity do not admit this, (and I think it does not) their Farms muſt be increaſed out of the very large ones; or, 3dly, their preſent Farms ſhould not be advanced in Rent more than to allow them a competent Support out of the Profits; eſpecially if the advanced Rent is to be paid out of the Profits of Ploughing, and their Situation allow not that Reſource.

Farmers' proper Families.

A FOURTH Head of Complaint is, that ſome Farms belonging to Widows or ſingle Women have been raiſed a full Third of their Rent; which different Proportion from that of the reſt, cannot be accounted for by the Largeneſs and Goodneſs of their Farms at the old Rent, but muſt be accounted for by the ſingle Circumſtance of theſe Farmers being ſingle Women without *proper* Families.

Now

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* Except in Caſes where a Steward has occupied Farms, and burthened others to lighten himſelf.

Now on this Head it is complained (and with great Appearance of Truth) that after a very few of the firſt Years of Life, a Farmer's Children become his *Riches*, and that a ſingle Perſon (eſpecially an old or infirm Widow) who has no helpful Deſcendants, or other near Relatives, and is obliged to hire all the Work of her Farm, is ſubject to much greater Needs than thoſe are that have Children likely ſoon to become uſeful Servants; eſpecially if Ploughing is to be managed by Servants, or not to be attempted at all. Inſomuch, that if a Difference in raiſing the Proportion of the Rents is to be made, it ſhould be in Favour of the ſingle Women, or they ſhould be diſcharged.

Bad Managers.

BAD Managers will not complain, as *ſuch*; yet as they are a very conſiderable Corps in themſelves, ſo might they (under a fifth Head) juſtly complain of being raiſed to a higher Rent than they can pay. Bad Management ariſes from various Sources, viz. Ignorance, Obſtinacy, or Slothfulneſs of Temper, Sickneſs, Age, Extravagance, Poverty, &c. &c.

So far as bad Management ariſing from any of theſe Sources can be cured, proper Means ſhould be applied; and ſometimes Advance of Rent may prove the moſt effectual; as in Caſes of *Obſtinacy* and *Slothfulneſs*. But where there is no Probability that any Means will prove effectual, the Method which Humanity and Prudence conjointly point out, is, " not to raiſe Rents, but to change the Tenants!"

Prudence

Prudence may convince a Landlord, that Advance of Rent with Change of Tenant will enable him to ſhew all due Humanity, by providing for the natural unavoidable Wants of an old bad Manager, who by invincible Ignorance, Sickneſs, Age, or Poverty, (nay, even by Obſtinacy, Slothfulneſs, or Extravagance) is ſuch.

I do not, Sir, here include Tenants who are only *relatively* bad Managers, viz. Such as do ill on one Farm and may do well on another. The Man who for want of being bred to the Plough, tills his Ground badly, may graze well; and he who tills well, may loſe Money, even all the natural Profits of a good Farm, by Want of Judgment in buying and ſelling of Stock. In ſuch Caſes, Humanity will preſcribe that "every Man, if poſſible, ſhould be placed in his proper Sphere."

Of Roads.

THESE are of ſo great Conſequence to the Farmers, eſpecially in Tillage Farms, where Corn is to be carried, and Manure brought back, that a judicious Landlord ſhould both uſe his Influence as a Magiſtrate in compelling the Conſtableries adjacent to his Eſtate to fulfil what the Law requires, and open his Purſe-ſtrings to encourage his Tenants, if they want Encouragement, to lay this great Foundation of many real Improvements.

Your Town of *Huntingdon*, Sir, is now become a conſiderable Corn-Market, as the Navigation from you to *Lynn* opens a fine Channel of Exportation.

portation. The Turnpikes from North to South, and ſeveral croſs ones, make Land-Carriage much eaſier than it was ſome Years ago; and wherever a few Miles of good Road are wanting in this deep clayey Country, they might, ſurely, be made by a ſpirited Landlord and Tenants, aided by Laws; and the Lordſhip in queſtion might effect good Roads, eſpecially as they have Plenty of good Gravel; ſo that it muſt remain Matter of Wonder if they do not, when Rents are advanced, and theſe are to be paid by growing of additional Corn; and eaſy Carriage is ſo great an Encouragement to fill the Markets, or keep up Exportation.

Of Poor.

WITHIN ten Years from this Time, the Lordſhip in queſtion paid ſcarcely a Shilling to their Poor, and now pay a conſiderable Sum. It is of Importance to examine this Fact. In the firſt Place, the Tenants want Cottages for their induſtrious Poor, and are obliged to hire Houſes for them in other Pariſhes, to a conſiderable Amount. Secondly, Luxury has fixed her pernicious Foot there, and Tea is drank *daily* by Perſons who ſhould not taſte it *yearly*. The natural and rational Remedies to theſe Evils would be, 1ſt, Building of Cottages for the *induſtrious* Poor *. By this Means the Farmers

* If Juſtices of Peace cannot compel the Pariſh Officers to do this (which ſeems queſtionable) it is a ſcandalous Defect in our *voluminous* Poor Laws. Is it a Matter to be left to the Diſcretion of Pariſh Officers, whether the Poor ſhall be allowed to live where they are ſettled, and will

mers would have Labourers at Home, who now walk daily one or two Miles from other Villages to their Work, and conſequently back again, and ſink ſo much Time, or (in other Words) are paid for doing Nothing.—If the Farmers could calculate the yearly Loſs by this Article, and add what they pay for Houſing of their Poor in other Villages, they would find it amount to the Intereſt of a Sum which would build ſeveral Cottages. But ſince Rents are advanced in the Lordſhip under queſtion on the Proſpect of much additional Corn to be grown, and the Need of Labourers muſt increaſe in Proportion to that Growth of Corn, ſurely the Landlord and Tenants will agree about Building of ſufficient Cottages, or their Œconomy muſt be ſadly defective. The ſecond Remedy is to enable the Mothers of Families to bring up their Children with Milk, the moſt natural Food of Infants.

Two Ways of ſupplying a Want of Milk are propoſed, viz. by enabling the Labourers to keep Cows, and by obliging the large Farmers to ſell Milk to the Labourers. The former is the more popular, and the latter the more prudent Method. Many Objections (and, I think, unanſwerable) may be urged againſt making Cow-keepers of Labourers, and I know none of Weight againſt Obliging the Farmers to ſell Milk. The moſt plauſible is, "If we ſell even ſkimmed Milk to the Poor, we cannot keep ſo

will have the Perſons who are to ſupport them in old Age, Witneſſes of their Induſtry and Temperance, or be obliged to live among Strangers? If Tenants *cannot* afford, Landlords *can* afford to build them neceſſary Receptacles.

many Calves and Hogs." Any Chriſtian ſhould bluſh to make, and any *Engliſhman* to *hear* this Objection made by his Countryman!

It is ſaid indeed (and perhaps truly, in many Caſes) "that ſelling of Milk will not cure the Poor of drinking Tea."—I anſwer, "When you ſell Milk for the Mother and Infants of the Poor, make the drinking of Tea by them penal, almoſt as penal as you pleaſe: But if your denying to ſell Milk drives them to drinking of Tea, blame yourſelves for this luxurious Cuſtom, pernicious both to their Purſes, Bodies, and Minds too.*"

Of Contiguity of Lands in a Farm.

ANOTHER Point of juſt Complaint to the *rational* Farmer, in the Lordſhip under Queſtion, is the Neglect of Contiguity of Lands in a Farm. This Contiguity is a Point of ſuch vaſt Conſequence, as in ſome Caſes to *double* the Worth of Lands. If any Perſon thinks this much too high a Proportion, let him conſider the Effect in a ſmall Farm; where Attendance on ſeparate Stocks, eſpecially ſmall Flocks of Sheep, in a buſy Seaſon, may be ſo great, as to endanger not only the Profit of ſuch little Flocks, but even a conſiderable Part of their capital Value; and conſequently where not only the Profit of a ſmall Ground ſo ſtocked, but even its Rent, may eaſily be loſt by that Neglect of

* Alas! the Women, in this Article, have corrupted the Men, who are known to grow as fond of Tea as their Wives are.

of one Part which Attendance to another may inevitably occaſion.

And although the Effect of this Neglect of Contiguity will not be ſo ſenſibly felt in large Farms under tolerable Farmers, who will have *neceſſary* Attendance, whatever it coſt, yet the very Expence of that Attendance is greater than can eaſily be imagined. In that Lordſhip which we now examine, one Tenant has two Sheep-walks in the ſame Pariſh; but at ſuch a Diſtance that he is obliged to keep two Shepherds to give them the neceſſary Attendance, which if they were contiguous, as they might be, all the Lordſhip (except the Glebe) belonging to the Lord of the Manor, one Shepherd might ſupply. The Difference in Wages and Board is nearly 20 *l. per Annum.* The Contiguity of arable Lands and the Barns and Home-Stalls is alſo an Article of conſiderable Importance.

I muſt conclude this Head of Contiguity by obſerving, that as it has ſeveral other Advantages, ſo it has this remarkable one, viz. "By laying together under one Tenant Lands now under ſeveral, much expenſive Fencing may frequently be ſaved."

Of Aſſortment of Lands.

THERE is hardly any *prudent* Farmer (and ſuch only can be a *good* one) who would wiſh to have his Farm, eſpecially if a large one, conſiſt of rich high-rated Lands only; and no Farmer of Senſe will hire longer than abſolute

Neceſſity requires, a Farm, eſpecially a large one, totally of bad low priced Land.

Young or ſtore Stock do well on low-rented or at leaſtwiſe middling Ground; whereas not only feeding Stock, but milch Cows, and good Colts ſhould have a rich Soil; and meadow Land ſhould be ſuch as brings a large Burthen if not of fine, at leaſt of long Hay, and therefore cannot be expected to be farmed at a low Rent.

Again: Land of low or middling Rent pays beſt for Ploughing; and without the Plough few Farms of any tolerable Size can well ſubſiſt.

Now it will ſeldom happen that any old Farm (eſpecially if it be a Collection of ſeveral ſmall ones) will have the neceſſary Aſſortment of Lands, any more than Contiguity; as it is juſtly complained in that Lordſhip which we ſurvey, that ſome of the Farms conſiſt totally of good, others totally of bad Land. Yet by throwing together a whole Lordſhip of the Size of that in Queſtion, and then forming a Sett of new Farms, a proper Aſſortment of Lands to each, and Contiguity too in a reaſonable Degree, might be provided for.

Indeed on this rational Plan an old Farm-Houſe muſt now and then be removed, or even a new one built. But I hope to evince in a future Article that there is no neceſſary Expence very formidable on this Head.

Of Commons unincloſed.

THE Perſons who are told that the Lordſhip under Examination is an old incloſed one, and that yet it has a Common unincloſed, will be ſurprized; as the ſame Principles which effected a general Incloſure, might reaſonably be ſuppoſed to have operated uniformly, and to have incloſed the Whole. What will make this Phænomenon ſtill more ſurpriſing is, that this unincloſed Common retains evident Traces throughout, of having been under the Plough, and has a uſually running Brook through it, and is fringed with an ancient Wood, which would have ſupplied, at a trifling Expence, the Materials of good Fencing, both Quickſetts, Poles and Poſts: So that it might have been incloſed on moſt advantageous Conditions when Arable.

It is now however (and has been Time immemorial) aſſigned in ſtinted Proportions to the Cottagers, and as there are few of theſe, each would have had a pretty little Cloſe; but it is now quite over-run with Thorns, Hills, Brakes, Moſs, &c. &c. ſo that each Cottager has rather a Right of *ſtarving* ſo many Cows during half the Summer than of *milking* them. As the Cottagers are all Tenants at Will on rack Rents, is it not aſtoniſhing, that on the Advance of Rents which is going to take place, no one Tenant in that Lordſhip ſhould have ſpoken one Word, or (as far as appears) have beſtowed one Thought on Incloſing that Common? *

* Since the Writing of this Paragraph, a natural Deſire of incloſing this Common has ſtruck all the Tenants, and is likely to be carried into Execution.

Of Abolition of Tithes.

BUT a much greater Neglect is complained of by every rational Man in that Lordſhip.

The Circumſtance of taking Tithes in Kind is ſo loudly complained of through the whole Kingdom, eſpecially in Corn-growing Lordſhips, that ſome † Gentlemen (in general judicious) diſſuade a Farmer from taking any Farm ſubject to this great Inconvenience. If this Advice be ſtretched too far, yet certainly the Convenience, nay Advantage of hiring a Farm *Tithe-free*, is ſo great to the Tenant, (and conſequently to the Landlord *ultimately*,) that whenever it can be obtained, it ſhould. And if the Rector or Vicar be a Character worthy of his Profeſſion, he will be ſo ſenſible of the Prejudices againſt and Obſtacles to the Efficacy of his Miniſtry, which Tithes create, that he will acquieſce in any reaſonable Terms for their Abolition: and as no Terms but reaſonable ones, are likely to be laſting, it will be the united Intereſts of Landlord and Tenants, as well as Rector or Vicar, to make them laſting. On this Baſis, and on this alone, will many laſting real Improvements in Agriculture be undertaken *.

The only conſiderable Point in Diſpute is, how to make Abolition of Tithes *legal*, and therefore

† Of this Number is Mr. *Young*.

* What an Advantage to the Tenant to be allowed to till for one Courſe a Field of twenty Acres, where he will have the Advantage of the Crops *Tithe-free*, when that Tithe may be equal to the Rent!

therefore *laſting*. The Expence of an Act of Parliament is generally thought too dear a Purchaſe of ſuch an Abolition; although I am perſuaded that this would not often be the Caſe, where the Agency is in proper Hands and no Oppoſition is formed, and the meer Fees of an Act and ſome few other neceſſary Expences are to be made.

But if theſe neceſſary Expences appear too dear a Purchaſe of ſo deſirable an End, an Attempt to aboliſh Tithes ſhould be made by a Method not *abſolutely concluſive*, yet very likely to prove ſo, viz. "under a Commiſſion from the Ordinary to neighbouring Clergymen." How much * of the Glebe of the whole Kingdom is now thus ſettled! If a reaſonable Valuation of the Tithes be made, and an Equivalent in Lands † be given, it is *ten Thouſand* to *Unity* that no prudent Succeſſor of any Rector or Vicar will break through an happy Settlement thus made, eſpecially where the Lord of the Manor is Patron of the Rectory or Vicarage, and will chuſe only prudent Men.

There is no Doubt that in the Lordſhip under Queſtion, ſuch Abolition of Tithes might eaſily take Place.

Of Ploughing.

THIS appears to me one of the moſt debateable Articles in Farming betwixt Landlord and Tenant.

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* In particular, of the Pariſh in which the Writer of this Letter reſides.

† Not in Money, becauſe the Value of Money fluctuates, or rather is always declining; whereas the Glebe will riſe with the reſt of the Land in the Pariſh.

Almoſt every Farmer longs to hold a Plough, yet not one in ten knows how to manage it! Some Tenants would plough out their richeſt Lands; and ſome Landlords will not allow the worſt to be ploughed out and actually improved. The Truth in this Article, as in moſt others, lies in the Medium. In general, there are few Lands which ſhould not in a long Courſe of Years be ſometimes ploughed out; and there are not many which ſhould be ſuffered to be long ploughed. A Rotation is in almoſt all Lordſhips the beſt Management!—In that Lordſhip under Queſtion are many Hundreds of Acres, which have continued ſo-long unploughed, that they would naturally improve almoſt in *any* Management by the Plough for a few Years. But I will be more particular.

Ploughing on hilly, moſſy Ground.

OF this Kind of Ground are many Hundreds of Acres, in which the Hills are ſo large, that if divided into four Parts, each would fill more than one Buſhel. Theſe Hills either totally, or chiefly (eſpecially on the Side averſe to the Sun) are covered with Little or Nothing better than a ſhort Kind of wild Thyme, Moſs, or a long coarſe Kind of Graſs, like that which grows on many *Downs*. How many Thouſands of Acres of this Sort of Ground are to be found in all this Track of Country, betwixt my Rectories! Many of the Farmers of them would tell Mr. *Young*, that they would not for ever ſo much turn theſe Grounds into *arable*; as they are a Reſource to their Cattle in a dry Summer.

That Gentleman (or any other ſenſible Man) would think them either *Ideots* or *Lunaticks*. But he would be ſtill more ſurpriſed, when he learned that our Farmers attempt to mow round theſe Hills and collect the wretched Pittance of Graſs, &c. buried all Winter in Wet. We have however People who *honour* themſelves with the Name of *Improvers* of this Kind of Ground for the Scythe. But how do they effect this Improvement? Truly, by cutting off the moſſy, &c. Head of the Hill, ſpreading the Core, and clapping down the Head again at a Seaſon, when it is likely to cloſe with the adjacent Swarth. This Method they call *Throwing*, and doubtleſs it anſwers for a certain Time and in a certain Degree. The Earth which is ſpread improves the whole Surface and gives a ſucceeding Crop much improved. But is this Method a radical Cure, Sir? Certainly not. Let us look into the real Defects of this Sort of Soil, and we ſhall ſee *how far* they are from being cured by this Method.

1. One principal Cauſe of the Impoveriſhment of this Kind of Soil is, that the Ants which originally raiſe theſe Hills, ſelect from the Clay, the Sand (or ſmall Gravel) in order to form for themſelves dry Beds in the Hills, that the Rains may preſently run away. Thus the circumjacent Soil becomes continually more and more clayey, conſequently worſe, as the natural Graſs is more and more injured by the Wet continuing in the Clay.

2. Another principal Cauſe, is, that the Roots of the Graſs which would grow on the

Hills, are eat by the Animals, which form and occupy them, and the Hills are rendered ſo porous as to produce nothing but wild Thyme, Moſs, or Graſs of the Downs.

The Defects of this Method are

1. The Surface of ſuch Hills clapped down can never produce good Graſs, as no Roots of ſuch ſubſiſt in it.

2. The Ants thus *diſturbed* a little, not *deſtroyed*, ſoon begin to raiſe new Hills, &c.

3. No good Graſs can get through the hard bound Surface, which was not moved at all.

From *all* theſe Cauſes, the Ground returns very faſt to its priſtine State, whereas the Plough radically cures all theſe Evils, by a proper and neceſſary Mixture of the different Particles of the Soil, by deſtroying both wild Thyme, Moſs, and downy Graſs, by opening the whole Surface, killing the Ants, &c. &c. eſpecially if good Seeds are beſtowed on this Ground when laid down to Paſture or Meadow.

Is it not then one of the ſtrangeſt Phænomenons of this wonderful Age, that Landlords and Tenants ſhould unite to keep this Sort of Land in its preſent barren State? An Apologiſt for the Continuance of Hills in Paſtures and Meadows, lately told me with a grave Face, That the Farmer of Ground overrun with Hills, has more Land than he would otherwiſe have. Such a Man ſhould be deſired to erect more Pins perpen-

perpendicularly on the Outſide of his Hat's Crown than he can on the Space which it covers. Yet this Man farms 200*l. per Annum!* Another with a grave Face tells us, That the Advantage of hilly Ground is, that the Snow quickly melts from the Top of Hills, and then the Cattle get to Graſs: But he forgets to ſhew where that Graſs is.

Of Sainfoine.

THE Certainty that Sainfoine will flouriſh on Soils thought hitherto incapable of it, is a great Acquiſition which we owe to the Eaſtern Tour of Mr. *Young*; and I now hope to ſee Lands of various Qualities in the Lordſhip of ——— laid down with it, whereas at preſent they have not one Perch. This is a *moſt-laſting* as well as *generally-beneficial* Graſs, and will well ſupport a Rotation of Ploughing.

Of Ploughing on low wet Land.

IT is evident that Ploughing on wet Land can never anſwer without ſufficient Drainage, and your Fens, Sir, are amazing Inſtances how much it anſwers with that Improvement. However, Experience alſo ſhews, that when this Operation is completed, the *beſt*, nay *only ſucceſsful* Method of bringing this Kind of Soil into Tillage, is by Paring and Burning. Mr. *Young* has done much more than any Body I know, towards exploding the ridiculous Prejudices againſt this Method of Cultivation, ſo advantageous both to Landlord and Tenants, on Lands not only abſolute Fens, but ſuch

as approach to their Nature. In that Lordſhip which we examine, are many Grounds not only *ſo hilly* as the above mentioned; but naturally *ſo wet* as to require Burning in Order to reduce the Hills, which when dry will burn well and be ſoon converted to rich Manure, at the ſame Time that the tough Swarth of the other Parts of the Ground will by no other Method be ſo quickly * brought into Order; and from the Theory which Mr. *Young* has given of the *Turf* thus burnt, it is moſt evident that no real Hurt to the Soil can accrue from Paring and Burning once in every pretty conſiderable Series of Years.

Of Draining.

I MUST give an Inſtance, how inſenſible ſome of the Farmers of this Country are of the Benefit of Draining. One of them in the Manor under Queſtion, (a female Farmer indeed) complained that ſhe had loſt a great Number of Sheep ſince Michaelmas laſt in the Rot; and on my Inquiry into the Cauſe, anſwered, that it was the Over-flowing of a *Water-Courſe* in her Ground; which (ſhe ſaid) was the Buſineſs of the Landlord to ſcour. I inquired into the Expence of the Scouring of this Courſe, and was anſwered, that "it would be found three Pounds." Hereupon, I reckoned up the Loſs which ſhe had ſuſtained in her Sheep, and convinced her that

* See the Accounts of the great real Improvements of the Marquis of *Turbilly*, by this Method, in *Miln's* Complete Syſtem, &c.

that ſhe had loſt many Times the Expence of the Scouring: And while ſhe was diſputing with her Landlord about the Perſon to whom the Expence of it belonged, ſhe ruined herſelf.

Of Courts of Lords of Manors.

IT appears from this Conſideration highly adviſeable, that Lords of Manors ſhould keep *Courts*, as theſe are the only regular and ſure Methods of maintaining real Improvements in Hedges, Ditches, &c. and preventing Nuiſances. Whatever Diſpute there may be of the *legal Power* of a Lord of the Manor to levy Fines impoſed in his Court, when that Lord is in a Manner ſole Proprietor of the Soil, there can be no Foundation for any Diſpute of Conſequence, as the Lord can by the Authority of Landlord ſtill all the Contumacious.

Of hollow Draining.

I MUST add as an additional Proof of the Barbarity of that Lordſhip which we ſurvey, that although much of the Manor is low, wet, and poachy, and the open Drains daily cloſe up, there is not (ſo far as I have ſeen) one Rod of *hollow* or *cloſed* Draining in the whole Demeſnes, although they have Plenty of faggot Wood; notwithſtanding that Mr. *Young* has given ſuch abundant Proof of the Utility of covered Drains *.

* Since the Writing of this Paragraph, an Attempt of this Kind has been made in that Lordſhip. An happy Effect of Advance of Rents!

Of the Quantity of Tillage in a Farm.

THIS is a very complicated Inquiry, and muſt at laſt be determined not only by the Nature of the Land (although this muſt never be diſregarded) but by a nice Conſideration of all other Circumſtances. Theſe, in all their Variety, I ſhall not attempt to conſider. But there is one Conſideration, which next to the Fitneſs of the Soil for Ploughing, I ſhould recommend to mature Conſideration both of *Landlord* and *Tenant*. This is the Ability or Convenience of the Tenant to till any propoſed Quantity *properly*.

In general, "the Farmer who propoſes to plough *properly*, ſhould either be able to hire with Certainty a ſufficient Draught for ploughing his little Arable, or have ſo much as will fully employ a Team of his own."

Not one Farmer in ten can depend on Hiring his Ploughing, Harrowing, Carting of his Crop, and his Manure. Few, except bad Farmers, let out their Teams; and they who do, if they have any Prudence, will take Care to finiſh their own Work firſt, that is, take the Prime of every Seaſon, and delay their Neighbour's Work ſo as to do as much of it as poſſible. Good Farmers know a Team to be ſo chargeable, that they will endeavour to have it fully employed in their own Work at Home, and not be obliged to roam round a Country to ſeek Employment. Sometimes two little Farmers join to keep one Team. But this Method is ſo productive of Com-

Complaints, ill Neighbourhood and mutual Diſappointments, that I would never encourage the Scheme. In ſhort, a prudent Landlord will *almoſt always* either "ſuffer his Tenant to plough enough to employ his Team, be that what it will, or Nothing!"

Now the ſmall Farmers of that Lordſhip which we examine, complain (and with ſeeming Truth) that they neither have Ground enough (proper for Ploughing) allowed to employ a Team; nor can depend on hiring one.

Of Ox and Horſe Teams.

EVERY Day's Experience ſeems to prove more and more clearly, that an Ox-Draught is preferable to an Horſe-Draught, (eſpecially a long Draught of four Horſes with a Driver) in all Situations for home Work, if not for Road Work on Turnpikes; and that even there Oxen, if ſhod, and drawn in Harneſs and with Collars, ſingle, and ſlowly driven, perform very well. Yet the Averſion of Farmers in this Country to Ox-Draughts is aſtoniſhing; and therefore they have, ſurely, much leſs Temptation to Ploughing than they would have, if they could break through that ſtrong Prejudice, which I ſhall further conſider in a ſubſequent Article.

Expences of Horſe Teams.

MR. YOUNG has deduced from his various Tours that the annual Expence of an Horſe-Team is very great, on a Collection of

Averages

Averages through the *Kingdom*; and from all Accounts which I can collect in this Country, I cannot learn that one ſhould ſtate the Average annual Expence of an Horſe leſs than 10 or 12 *l.* Thoſe who keep a Team of Horſes *to wear out* in the Plough, muſt make a conſiderable Allowance for a ſinking Capital; and thoſe who buy in Colts when two Years old complete, to ſell again at five, run great Riſques through the various Accidents, to which theſe Colts are liable. Colts are bought from 15 to 18 *l.* at that Age in this Country, and ſold from 20 to 25 *l.* Now if we ſuppoſe no Accidents to befall them, if we ſtate their annual keeping at 10 or 12 *l.* and ſuppoſe the Average of their Prices at five Years old to be 22 *l.* 10 *s.* we ſhall find the Expence of their Labour to be very conſiderable, and if we make juſt Allowances for the Accidents which render them either totally unſaleable or only ſaleable at a much lower Price, the Expence will be much higher. In Order to improve his Colts, the Farmer muſt work them very gently the firſt Year, and yet keep them well, and he muſt not depend upon them for Work even the ſecond Year.

A principal Farmer in this Neighbourhood, (well known to you, Sir,) informs me, that convinced of the Expenſiveneſs of this Method, and the little Work to be reaſonably expected from three and four Years old Colts, if kept to improve; he keeps his Horſes till ſix and ſeven Years old, when they will do twice as much Work as at three and four. But he muſt ſurely find it difficult to part with them at

at that Age at a full Price. Beſides, the heavy black Kind of Horſes, almoſt univerſally uſed in this Country, are very apt, when much uſed, to go blind. The Gentleman-Farmer juſt mentioned, ſold one of his fineſt Horſes laſt Year, which falls in that Condition, and he has three more in the ſame now: whereupon he is reſolved to purſue that Scheme no longer.

The Scheme of Keeping Brood-Mares to work, and Selling the Colts at two Years old, ſeems alſo liable to great Objections. The Mares, if much wrought, will frequently caſt their Foals and recover ſlowly, and will ſtarve them when foaled, if kept cloſely to Spring and Summer Work.

On any Principles, I apprehend, an Horſe-Team will be found a moſt expenſive one, for Home-Work. By Experience I am authoriſed to ſay that Oxen will do conſtant moderate Work with coarſe Hay without any Corn, and when not in conſtant Work will even thrive on good Straw. It is worthy Obſervation, that this Animal by *chewing the Cud* renders coarſe Food good!

When we come to conſider the high Price of Corn, in the Sequel, and reflect that we *import* Oats to a vaſt Amount, we muſt remember how ſtrong an Argument for Abolition of Horſe-Draughts ariſes hence.

Of Cutting Chaff.

THE well-known Expence of keeping Horſe-Teams in Time of Work, has contributed, doubtleſs, to the Practice of *Cutting*

 Chaff,

Chaff, or *Chopping Straw and Hay*, ſo prevalent in this and other Southern Counties, and ſo totally unknown in the North. The Farmers of theſe Southern Counties do not ſuppoſe that Hay and Straw (which they mix in different Proportions, according as Hay is more or leſs dear) does more Service to their Horſes when chopped than when unchopped; but as they give Hay and Straw chopped, only as a Bait, (and confine their Horſes uſually to Straw alone in the Yard at other Times) by being chopped, it is much more readily and effectually chewed and digeſted ſufficiently; ſo that Horſes fill their Bellies much more ſpeedily with the chopped than unchopped Materials; and our Farmers are convinced, that the Advantage of this Hay and Straw cut or chopped, abundantly anſwers the Coſt. A Man cuts four Quarters in a Day, and has 12 *d.* and his Board; ſo that a Quarter coſts Cutting only 6 *d.* at moſt, or under a Penny *per* Buſhel.

Of Farmers' Dwelling Houſes, &c.

ON the Plan of Throwing together a whole Lordſhip, and then Apportioning it into new Farms, one or more Dwelling Houſes (as I obſerved) may be neceſſary to be *rebuilt* or *new-built*. All the Articles of Building and Work are in this Country very dear. Yet when the Advantages accruing from theſe Buildings are eſtimated, I apprehend the Expence will not appear formidable to any prudent Man. It is eſtimated * that "Leading is one third of the whole Expence." This muſt vary according

* By Mr. *Garton*, Steward to *T. Duncombe*, Eſq;

according to Circumſtances; but may be a good general Eſtimate. Let us ſuppoſe one Year's old Rent to be the neceſſary Expences of the whole Buildings. No reaſonable Tenant will refuſe the Leading, although it may hurry and diſtreſs him a little. Now if 1*s.* 6*d. per* Pound be added to the intended Advance, for the other Two-thirds, it will never be objected to by any Tenant who juſtly eſtimates the great Advantages of Contiguity and proper Aſſortment of Lands; and the Landlord can have no Reaſon to complain.

Will it not aſtoniſh any *real* Improver to hear, that in the Lordſhip, which is the Subject of our preſent Survey, notwithſtanding the late Advance of Rent, on one of the moſt conſiderable Farms, there is neither Dwelling-Houſe nor Barn, nor a Likelihood of being any? The Ground is farmed by a Grazier, who lives at the Diſtance of ten or twelve Miles. The Conſequences of which Management are, 1. That there is not one Acre of *Arable*; 2. That there is not one Acre of proper Meadow, the Little which is mown being ſcraped from among clayey Hills; 3. The Paſtures are overrun with Hills and Swamps, and lie in large Incloſures; ſo that this whole Farm is nearly in a State of *natural Barbarity*.

How miſinformed muſt the affluent Owner of this large Track of Land be!

I am well aſſured, by a ſenſible, attentive Farmer, who (is now only a little turned of thirty Years of Age, and) has been educated on a Farm adjoining to this in Queſtion, that He can well remember ſince one Ground of this

neglected Farm would have afforded Eatage worth 20*l. per Ann.* more than it now does, merely on Account of the incroaching Hills. This Ground contains 120 Acres. Now if a Ground of theſe Dimenſions has, in about 15 or 20 Years, ſunk 20*l. per Ann.* in Value of Eatage, in Conſequence of incroaching Hills, how ſtrong is the Argument for their Extirpation!

Barns and Cow-Houſes.

THE former of theſe are natural Requiſites to ploughing, and the Benefits of the latter are ſuch great Inducements to *real* Improvements in Agriculture, that no prudent Landlord will refuſe the Erection of one or the other. Under Barns I underſtand Fold-Yards or Farm-Yards. The Expences however of any of theſe are ſo great in this Country that they ſhould not be left by any Means to the Tenants. If they pay advance Rents on the Proſpect of Ploughing, they may reaſonably expect the Requiſites to good Management of it. The Farmers of the Lordſhip in Queſtion complain however on this Head of great Wants.

Marle and Lime.

AS Marle is not yet found (ſo far as I can learn *) in this Country, and the Lime which comes by Water, is of Chalk, conſequently a weak Sort, and at an high Rate, viz. 6*d.* per Buſhel, or 16*s.* per Chaldron, beſides Land-Carriage

* Since I wrote this, I have ſome Reaſon to doubt of this Fact. I ſuſpect that what is dug up in *Woolley* Fields under the Name of *White-Clay* may be Marle; and if this prove ſo, Marle may be found in the Vicinage, and prove of vaſt Benefit.

Carriage about ten Miles, little or none of it is bought by our Farmers, (except a Trifle for Brining of Seed-Corn) although we have in this Neighbourhood much unbroken clayey Ground, which probably would *open* well with it, and richly repay that Expence.

I am informed however that there is Plenty of Lime-Stone in Lord *Carysfort*'s Eſtates about *Stilton* and *Yaxley*, and that Mr. *Bayley* has made thence great Improvements.

If this be a Fact, (which I doubt not,) ſurely the Farmers in this Neighbourhood (and the Lordſhip under Queſtion) might encourage the Burning of Lime there with great Advantage to themſelves, as they are near a good Turnpike, and might bring it in *broad wheeled Waggons* *; and as it is a notorious Fact, that Furze without Coal will burn Stone-Lime, and that Country abounds with Furze; the Burners might ſurely afford Lime at a very reaſonable Rate. The Theory of Lime is now ſo well known, that it is underſtood to ſuit well with almoſt any *freſh* Ground, as it is a *Provocative*, and therefore is very deſirable for the Grounds, eſpecially ſtiff Clays, to be ploughed out, before Manure can be collected from Crops.

Leaſes.

BUT the greateſt Diſcouragement to the Farmers in the Lordſhip under Queſtion, if diſpoſed to lay out any conſiderable Sum in real Improvement, is one with Regard to which (I dare

* I am informed that *C. Turner*, Eſq; (ſince I left Kirk-Leatham) has obliged his Tenants, who rent above a certain Sum, to keep a broad-wheeled Cart or Waggon.

(I dare ſay) you will join them, as Mr. *Young* and I do, in their Complaints, viz. that "if they find that they are likely to live on their improved Lands, they have no Reaſon to hope for Leaſes even for a moderate Term of Years." What Man of Senſe will expend on a Farm any Sum of Money, which is conſiderable to himſelf or Family, when he has no Aſſurance that he may not at the next Rent-Day be diſcharged; eſpecially when, however good and conſiderate the preſent Landlord may be, he may by *Sale* or *Exchange* or *Death* be ſucceeded by one of oppoſite Character! I muſt own, that when Tenants are expected to lay out any conſiderable Sums on their Farms, they ſhould have Leaſes for twenty-one or at leaſt fourteen Years granted, with as ſtrict Conditions as the Landlord pleaſes, and as good Security of Penalties incurred.

Clauſes for additional Rent per Acre for Ground ploughed out without Licenſe under the Landlord's Hand, are proper Checks on many Tenants; and they have of late uſually been ſo well worded that no reaſonable Man ſeemed to have Occaſion to doubt of their Validity *: but a very recent Confirmation of them by our higheſt Judicature, the Houſe of Peers, againſt a Decree of Chancery, appears now to have made them unqueſtionable; and the Public, both Landlords and Tenants, are obliged to the Gentleman, who brought this Matter to a deciſive Hearing; as the Certainty of recovering the Penalty will now diſpoſe Landlords

* The Damage done to Meadow-Ground or Paſture by Ploughing, is ſo great in ſome Caſes as not to be eſtimated.

lords more willingly to grant Leaſes with theſe Clauſes *.

Fold Manures.

I MUST now inſiſt, Sir, on ſeveral Articles of *real* Improvement, which are wanting, and wanting ſolely on the Part of the Tenants in this Neighbourhood (and that Manor particularly which we examine) and wanting in a great Degree. The firſt which I ſhall mention is a proper Attention to Fold Manures.

If Mr. *Young* viſit this Neighbourhood, (as he ſeems † to promiſe the Public,) he will execrate, and moſt juſtly, the Farmers whole Syſtem on this Subject.

They do indeed *cut* or *chop* Stubble, and ſometimes, nay generally, if they have Leiſure before the Rains fall, lead it Home, but frequently let it, thus chopt, remain on the Grounds where it grew, all Winter in Heaps; numerous Inſtances of which in the extenſive Fields of *Gedding* my Rides betwixt my Rectories ſupply, although the former Part of this Winter was ſo remarkably fine.

When they lead it Home, they ſtack it and bed their Fold-Yards with it. But how little Stock do they employ to eat up their beſt Straw in thoſe Yards! I hardly know one Farmer in that whole Lordſhip which we particularly examine, who keeps one Creature in his Folds except a few Horſes for his Team! Horned Cattle of all Sorts and Ages are wintered in the

* The whole Caſe deſerves the attentive Peruſal of All concerned in the landed Intereſt; and who is not?

† See Advertiſement to his E. Tour.

the Grounds, Paſture or Meadow. At *Alconbury*, &c. they are ſaid to obſerve a ſomewhat better Management. But too generally the whole Syſtem ſeems to be " to reduce the beſt Straw to Manure by Wet of any Kind!" How highly preferable is Mr. *Bakewell's* Syſtem of making his Straw paſs through his Cattle, and become a rich Manure inſtead of rotten Litter!

Of Compoſt Hills.

IT is no longer a Secret to the Public, that Hills conſiſting of alternate Layers of Fold Manures and of Earth are a great Augmentation and Improvement of the *Quantity* and *Quality* of Manures. But Nothing of this Sort ſeems to be *gueſſed* at in the preſent Scene of Obſervation. The common Complaint on this Subject is, that " Earth cannot be conveniently had to form theſe Compoſt Hills." On this Subject I will only ſay, that if the Hill is formed near Head-Lands of old ploughed Grounds, Earth will always be found! In wet Grounds the Ploughs and Harrows continually drag out great Quantities of excellent Earth, which become troubleſome, and riſe to an inconvenient Height, and oblige the Farmer to cut deep Grips through them to carry off the Water. If theſe were only dug up, expoſed to the Winter's Froſts, &c. then in the Fallow-Summer mixed with the Manures on the Head-Lands, what an Acquiſition in ſeveral Reſpects would here be! I know no Body who purſues this Improvement ſo ſteadily as that Friend of Mr. *Young* and myſelf, nay, of Mankind, *C. Turner*, Eſq; Member of Parliament for the City of *York*, and now its Lord Mayor.

To

To complete the bad Management of their Manure-Heaps, (although on theſe *alone* they depend for good Crops,) the Farmers of this Neighbourhood, when they lead out the half rotten Litter of their Fold-Yards, place it on an Eminence where the Sun and Wind may exhauſt as much of its Virtues as poſſible *, and where the Urine, with which it is impregnated, may run away as effectually as poſſible, inſtead of being ſaved by a ſlight ſurrounding Ditch, and returned by a Scoop to the Heap.

Of Hay-Stacks.

THE Hay of Farmers in this Neighbourhood is almoſt univerſally ſtacked in the Fields where it grew, except what is requiſite for their Teams of Horſes, which however generally are wintered on Straw. Their Cows are almoſt univerſally wintered where their Hay is ſtacked, (by natural Conſequence,) except a few Days about calving Time, and in general they calve in the Fields, except theſe be remarkably wet and diſtant from Home. Few Cows are allowed to ſuckle their Calves for the Butcher, although Milk naturally warm muſt be the beſt for any young and feeding Animal.

By this wretched Syſtem many Cows are loſt in calving, or ſeized after it with Variety of Diſtempers which impair their Milking and Thriving; their Meadows, which are generally

* The Day on which I write this, I ſee Manure laid laſt Summer or Autumn on to Lands deſigned for Barley in *Spaldwick* Fields, ſpread and unturned into the Earth at all, ſo that it muſt long have been the *Sport of Winds*, as its Maſter deſerves to be.

clayey and wet, are poached, their Hay is trod down and waſted, and what the Cows eat, does them not half the Good which half this Quantity given under Sheds (which cover their Ridges and yet are open on one Side to the freſh Air,) would. Cows ſerved in this latter Manner, have their Ridges dry, milk much longer and better before they go dry, calve better, thrive and milk afterwards much better, than in the *ſtarving* and often *fatal* Manner of Wintering them in theſe Meadows. In the laſt Place, the Manure which the Cows make when thus foddered under Sheds at Home, if laid thick in Succeſſion on Parts of the Meadows, will do ſo much Good to the unpoached Ground, that whoever tries the oppoſite Methods, will ſtand aſtoniſhed at the Effects.

The Objections to the right Syſtem in Favour of the wrong one, are three: Firſt, the Leading Home of the Hay is ſaved; ſecondly, the Building and Repairing of the Shed are ſaved; thirdly, the Leading out and Spreading of the Manure are ſaved. To theſe I ſhall briefly anſwer, firſt, the Expence of leading Home Hay when ready to ſtack, in that *fine* although *buſy* Seaſon, is not very conſiderable; ſecondly, the Expence of Building and Repairing open Sheds is not conſiderable; and, thirdly, the Expence of Leading out Manure, when a proper Seaſon is taken, is not conſiderable. And when theſe Expences are compared with all the Advantages thence accruing, the Ballance will be greatly on the Profit Side. I hear ſome Farmers inſiſt on the Diſtance betwixt their Meadows and Homes. The Inconvenience ought, if poſſible, to be removed, by changing the Deſtination of their

ſeveral Grounds: but if this Inconvenience cannot be removed, let the Farmer eſtimate the Inconvenience of Attendance on Cows in remote Meadows, viz. that of Men to fodder twice a Day, and of them, or Women, to milk as often. What Neglect of Keeping Cows to their Milk on this Account! Beſides, who knows not the Damage which Stacks ill-finiſhed, becauſe neglected on Account of Diſtance, are liable to, whilſt an Home Stack, always under the Maſter's Eye, may frequently be ſaved by half an Hour's Labour.

On the Whole, I am fully convinced that the nearer the Farmer approaches to Mr. *Bakewell*'s Syſtem of Home-Keeping of horned Cattle, the wiſer he will be.

Of Straw foddered in Paſture-Fields.

FROM what I have advanced on the preceding Articles, it muſt be obvious, that the wretched Syſtem of Hay, Cows, and Meadow-Fields, is too generally extended to Straw, young Cattle, and Paſture-Fields. Let any one, in this Month and the two ſucceeding ones, caſt his eye on old Paſtures where this Practice prevails, and he will ſee great Quantities of excellent Straw, (eſpecially Oat-Straw, nearly as valuable as equal Quantities of the coarſer Hay) which would have formed very good Fodder, and then Manure, ſadly waſted. Not one Crib is erected: The Servants throw down a large Quantity of Straw, to ſave the Trouble of often Bringing it from a Diſtance: The Cattle ſoil it with their Feet and Dung; it becomes no longer Meat for them; the Rains in Winter, and the

Winds and Sun in Spring, ſcatter and exhale its Virtues; and the hard-bound, moſſy Surface of the hilly Paſture receives as little Good from it as Manure, as the Carcaſes of the Cattle did from it as Meat. In ſhort, the young Stock depend upon the young Graſs of the Spring, (except in a Storm;) and the Paſture, inſtead of Gaining by the Straw, is injured greatly in the Source of its Summer Crop.

Of Dairy Farms.

I AM intirely, Sir, of Mr. *Young*'s Opinion, that Dairies are very generally a loſing Article to the Farmer, and eſpecially under ſuch Miſmanagement as that of this Neighbourhood above explained. Indeed we have few conſiderable Dairies, the Practice of *Firkining*, as carried on in the North, being almoſt intirely unknown here.

If you well conſider, Sir, the prodigious Quantities of beſt Hay which an hungry Cow, expoſed to all the Severity of Weather, eats, deſtroys with her Feet, &c. in a long Winter, from Martinmas to Lady-Day or Mid-May—if you conſider the great Age to which Calves are here kept for the Butcher, and the Quantities of new Milk which they *ſuck* or *drink* towards the latter Part of their Fatting, and then accurately ſtate on the one Side the Price of the Calf when ſold, and the Value of the little Milk which the Cow gives in Winter, and on the other Side the real Value of her Winter's Keeping, I am perſuaded, you will find that in general ſhe muſt enter not a little on Summer before ſhe begins to earn her Summer's Meat.

Then

Then value your Summer's Meat, and ſee how long ſhe will be before ſhe earns it out by Butter, Cheeſe, &c. I am afraid you will find, that ſoon after ſhe comes to net Profit, ſhe muſt be ſupplied with *After-math* or *Eddiſh*, or (as we call it in the North) *Fogg*, and that ſhe will even with this (whoſe Value is great to a Farmer who has fat Cattle of any Sort to finiſh) ſoon impair in Milk, eſpecially when the Rains, Winds, and Froſts in Autumn ſet-in early, and ſhe has no Shelter in Winter, if ſhe be to calve early enough in Spring to quit her Calf before ſhe enter her Summer-Paſture at May-Day.

If you conſider, Sir, how wet a Cow uſually lies all Winter under the wretched Management of this Neighbourhood, in what poor Condition her Carcaſe uſually is at the Time of Calving, how tender an Animal ſhe is naturally, how ill prepared to combat the Severities of Winter and of Spring, uſually late, when ſhe has calved and loſes her Hair, conſequently becomes much more tender and expoſed to Cold; you will be of Mr. *Young*'s Opinion and mine on this Article with reſpect to our Neighbourhood.

You may, I think, Sir, be confirmed in this Opinion (if you need Confirmation) of the general Unprofitableneſs of Dairies under the preſent Syſtem of *Management*, (I ſhould call it *Miſmanagement*) if you conſider, firſt, how often Calving is fatal to Cows thus treated; ſecondly, how often it is pernicious to their Summer Milking, even when their Lives eſcape, or are in no Danger; thirdly, how many other Diſtempers injure their Milking, viz. Felon, Foul

Foul in the Foot, Hurt on the Eyes, Red-Water, &c. fourthly, how often a Cow is without a Calf, or calves at a diſadvantageous Time of the Year; fifthly, how many Accidents a Cow is liable to, which cauſe her to caſt her Calf, &c. ſixthly, how often ſhe ſuffers by fighting with other Cattle, eſpecially in large common Paſtures.

I keep, Sir, as good a Cow as my Neighbours in general, and as cheap as they, but am obliged to keep her on a bad Syſtem, viz. "on ordinary Paſture in Summer, and dear Hay all Winter;" and am well convinced, that every Quart of Milk which ſhe gives, coſts me more than twice as much as I could buy it for of my Tenant. She ſupplies my Family with Milk about Half the Year, and gives not one Pound of Butter, and ſcarcely Cream for my Tea in Summer. That, under this clear Conviction, I keep no more, you will not wonder. Long and dear Experience has convinced me, that no Maxim of bad Œconomy in a Gentleman's Family is more prevailing than that of keeping Cows when he can buy Milk.

Till within a few Years of my Leaving *Yorkſhire*, I kept five Cows, which, under Trials with Variety of Servants, never ſupplied my Family all the Year with Milk, Butter, and Cream. Provoked at this Effect of either neceſſary Expence or Miſmanagement of my Man and Maid Servants, I let my Ground to my Tenant for 25*l. per Ann.* I ſaved Aſſeſſments, and the great Expence of getting my Hay, avoided Accidents, and ſupplied my Family with

with Plenty of Milk, Butter, and Cream, at Half the Expence.

The falſe Reaſoning of *Lady Oeconomiſts* on this Article is, " Farmers make Profit by Keeping of Cows; therefore I muſt, who have the Land at firſt hand." They forget the Diſparity of Circumſtances betwixt Landlady and Tenant; the latter is attentive to ſave his Graſs and Hay, and prevent Diſeaſes of his Cows, and Accidents; as his Wife is to ſave all the Milk, &c. Whereas the Landlady's Man and Maid are uſually careleſs both of the Food, Produce, and Animal. Beſides theſe Conſiderations, which create an amazing Difference in the two Caſes, after a long Attention to the Expences and Receipts of large Dairy Farms, which I perfectly knew, I have ſtood in Aſtoniſhment how Farmers are able to pay the high Rents they do pay on them in the *North*, with all their Advantages, and could never ſatisfy myſelf perfectly, but was obliged to have Recourſe to ſuch general Suppoſitions as the following, viz.

Firſt, As the Dairy is ſeldom or never the Whole of a Farm, the Farmer muſt gain more by the other Parts of his Farm than the World, or even He himſelf, apprehends.

Secondly, His Rent muſt be more under the *real Value* than is uſually ſuppoſed.

Thirdly, His Breed muſt be deeper Milkers than his Neighbours' Herds.

Fourthly, His Wife muſt have ſome uncommon Management; or,

Fifthly, He muſt have ſome better than ordinary Vent for his Commodities; * or,

Sixthly, The Years muſt be more favourable than uſual; or,

Seventhly, He muſt deviate from the common Syſtem to that much more perfect one of keeping all Winter his Cows at Home, providing green Winter Food, (viz. Turnips, Cabbages, &c.) laying his Manure thick on his Meadows, &c. &c. &c. all which Points Mr. *Young* ſtrongly and rationally recommends.

If theſe Cauſes, *ſingly* or *conjointly*, do not account for Dairies being profitable, (the Caſe of a favourable Rent excluded) I know not how to account for the Fact.

It muſt, Sir, be incredible to thoſe who well knew the North above twenty Years ago, and have not ſince ſeen it, how much we are improved in one Branch of our Cow-keeping, viz. "in houſing them during Winter." Every Cottager now has his Cow-houſe as certainly as his Cow; he attends her as the Groom attends his Racer, early at Morn and late at Night; and by his extreme Neatneſs, makes that a profitable Article which would otherwiſe be an unprofitable, nay, ruinous one.

Of milking without Ties.

ONE Circumſtance, Sir, and *one only*, in the Management of Cows in this Neighbourhood, as oppoſed to ours in the North, I approve, and wiſh my Tenants there to imitate, viz. the milking

* A ſhrewd Farmer may ſpeculate on the Riſe and Fall of the Butter-Market to a conſiderable Profit frequently.

milking of Cows without Ties. The conſtant Practice here evinces that the Cow is an Animal ſo docile as very generally to be brought, by gentle Treatment, to ſtand ſufficiently ſtill to be ſafely milked. Milking is a natural Operation, and muſt in general be a pleaſing Relief to a Cow, and on this Account all Animals love the Young which ſuck them. If either naturally or accidentally the Udder or Teats be ſwelled, chopped, or otherwiſe painful, they ſhould be eaſed by Emollients. If there be any incurable Soreneſs, the Animal ſhould be turned to feed. In any Caſe, the Cow or Heifer ſhould not be tied by the Legs, but by the Head or Horns; leaſt of all ſhould ſhe be tied by a hairy Rope, as the Cuſtom is in the North with us. Such an one will certainly give Pain to the tender Legs, and create Wounds; and inſtead of Cauſing the Animal to bear any other Pain patiently, will render her much more impatient *. Brutes, as well as Men, eaſily take Prejudices, eſpecially from unuſual Pain; and a Cow who will not ſtand quietly to be milked *without one* Tie, will ſoon not ſtand *without two*, and ere long a third muſt be applied to her fore Legs. Thus have I ſeen a moſt uſeful Creature made indocile by haſty Treatment, hampered and ſpoiled! Experience is certainly the beſt Miſtreſs: She cries aloud, that the Inſtances of Cows vicious with Ties are *numerous* in the North, without them *ſcarce* here.

* The Legs ſoon loſe their Hair, and become *wounded* and *ſore*.

The Cows in this Neighbourhood are generally a baſtard long Horn. They have ſome incontrovertible Advantages above our *Yorkſhire ſhort Horns*; firſt, they have a thicker Hide; conſequently, ſecondly, they can bear the Severity of Winter Keeping without Doors better; thirdly, they will live, nay, thrive on worſe Ground than the ſhort Horns; fourthly, their Milk is richer than that of the ſhort Horns.

But with all theſe ſpecious Advantages, the main Points remain undecided, viz. firſt, Whether they are worth keeping on a poor Soil? and, ſecondly, Whether they equal the ſhort Horns on a good one? As to the former Quere, my Neighbours at *Barham* aver, that they are abſolutely a loſing Article, and I believe them: As to the latter, the Point cannot be determined otherwiſe than by Experiment, viz. "Whether two Fields of equal Size and Value, equally ſtocked with the two different Sorts, produce, thro' the ſame Summer, more Cheeſe or Butter in ſeparate Trials." I violently ſuſpect, that altho' the long-horned Cow's Milk is richer, ſhe not only gives much leſs of it, but alſo a much ſhorter Time. But I will countenance no Prejudices *!

Polled Cows.

Farmers here and there in this Neighbourhood have a *polled* or *humble* Cow. In the northern

* The only conſiderable Dairy-Man in this Lordſhip under Inquiry, has a Breed of ſhort-horned intirely, and a choice Yorkſhire Bull. But Mr. *Beal*, the principal Farmer in my Pariſh of *Morborne*, has this Spring hired a Bull of Mr. *Bakewell* (Son of his *Two-Penny*, ſee Mr. *Young*'s E. Tour) for 12 Guineas, to bull 23 or 24 long-horned Cows.

northern Parts of the Kingdom we eſteem them *inoffenſive*, and ſome Farmers keep them on this very Account only. They are, however, eſteemed *indefenſive* for the ſame Cauſe, and eſteemed liable to receive many Injuries, eſpecially from ſtrange Cattle. But in this County, I find, they are generally allowed to be offenſive on Account of Want of Horns, that is, that they will puſh through any Hedge eaſier than an horned Beaſt. The Fact ſeems to be incontrovertible; and the Cauſe muſt be, that they find leſs Obſtacles from the Boughs of the Hedge to their *Fronts* (an unfeeling Part) than the other Kind to their Horns, from the Intanglement of the Boughs. In this County, the Farmers are ſo fully convinced of this Point, that they are often obliged to blindfold their humble Bullocks, Heifers, &c.

On the other Side, we Northerns know, that one of our well horned Oxen or Bulls will clap his Head cloſe to the Root of a Piece of the beſt dead Hedge; and bear away a prodigious Sweep of it, which a polled Beaſt could not hurt. It is well known, that the *Scots* have a large Mixture of the polled Breed.

Of clean Water for Cattle.

ONE execrable Miſmanagement of any ſtalled Cattle, eſpecially Milk Cows, is the obliging them to drink at a dirty Pond, whither run all the Drainings of all Dunghills, &c. It is amazing that any Man, raiſed one Degree above the Brute which he tends, can think of forcing an Animal, ſo naturally delicate as a

Cow, (whoſe Smelling is exquiſite) to allay that Thirſt which the dry Winter Meat occaſions and her Pregnancy heightens, with a Collection of every Filth! If the Public ſuffered not with him, he would deſerve to be puniſhed for his Barbarity, by the Loſs of his poor impriſoned Cow under any of thoſe Diſorders, which ſuch loathſome Drink may occaſion. If the Cattle cannot have fair Water ſoftened in a Ciſtern, let them at leaſt drink at watering Places railed off neatly. Excuſe, Sir, my having made this important Article ſo long an one.

Of Sheep as generally a loſing Article.

I OWN myſelf a Partiſan of Mr. *Young*'s Opinion; that even in the South-weſtern Counties, (viz. *Devonſhire*, *Dorſetſhire*, &c.) where the Farmers generally pretend not to a Knowledge of any other Article of Huſbandry, *Sheep* are a loſing Branch of Agriculture, on Account of the vaſt Quantity of Land, which is allotted to them for Graſs and Hay; and the leaſt which I can ſay of that Animal (uſeful and profitable to Individuals, and the Public under proper Reſtrictions) as managed in this Neighbourhood and the Lordſhip particularly examined, is, that, "it is rendered *much leſs profitable*, than it might and ought to be, on the Syſtem of advancing Rents, by a leſs perfect Œconomy than might be eſtabliſhed."

Of Summering Sheep.

THE Summering of Stock-Sheep ſeems leſs exceptionable by far than that of Summering fatting

fatting ones. The former have uſually a middling Paſture aſſigned to them, as they ought to have, but the latter have a Portion of the Paſture of fatting Cattle or of Milch-Cows. Now as a Sheep always bites near, and ſelects the ſweeteſt Graſs, I am clearly perſuaded that the fatting Sheep really injure the Paſture much more than is apprehended, and retard the Fatting or Milking of Cattle much more than is imagined. I know that a Mixture of Stock is in *general* Good, as different Stock eat different Graſſes, and feed on Ground dunged by other Species; but then I am fully convinced, that Cattle either feeding or milking ſhould have no *Interlopers* to ſhorten their Bite. Experiments on the Ground in like Years carrying a Stock of Cattle only, and Cattle and Sheep, might determine this Caſe. In dry Years how irremediably does a Cow-Paſture ſuffer by Sheep!

Of Wintering of Sheep.

THE common Method is to winter the *Lammocks* (as the Farmers here call them) or *Lamb-Hogs* with Hay, and to give Hay to no Sheep elſe, except in great Storms, or only to breeding Ewes, where the Maſter is more attentive than ordinary. The former is effected by ſuffering the Lammocks *uſually* to run to the Stack, the latter by carrying Waggon Loads of Hay, and diſperſing it about the Grounds, as Occaſion appears to require.

Of Running to the Stack.

THIS Method has long appeared to me both ſlovenly and waſteful, to be attended with many Inconveniences, and ballanced with no conſiderable Conveniences. The Hay which Lambs eat, ſhould be the beſt both in Nature and by Care, off the beſt Soil, and beſt got, conſequently moſt valuable. Great Quantities of this Hay fall from the Mouths of the Lambs, when they attempt to pull it with their very tender Teeth, from the loweſt and therefore denſeſt Part of the Stack, as is obvious to any Eye. It is almoſt inſtantly ſoiled with their Feet, Dung, &c. ſo that it becomes of little Uſe for any other Animal; and perhaps on this Account ſo few Farmers are attentive to rake the fallen Hay up twice or even once a Day.

The only Pretences for this ſlovenly waſteful Cuſtom are, that the Lammocks ſerve themſelves, and ſave the *Trouble* of Foddering *, that they ſoon form a Kind of Pent-houſe of Hay over themſelves and the Hay which they eat, and preſerve it dry.

As to the former of theſe Pretences, the Labour of Foddering ſaved is dearly paid for by the Value of the Hay waſted; and as to the latter, covered Cribs or Racks are unexpenſive, and preſerve the Hay totally from Rain, &c. Let us look at no unuſual Conſequence of a large

* Idleneſs is the principal Source of bad Management.

large Flock of Lammocks running at the Stack. As they can bite only to a low Height of the Stack before the Needs of the Seaſon occaſion it to be cut round and round, the Lammocks undermine it; and when high Winds, uſual in Spring, riſe, the Remains of the Stack frequently tumble, and are ſoon ſo ſpoiled by the Dung and Wet, as to become of not nearly their intrinſic Uſe and Value when Hay is moſt valuable. If you, Sir, have ſeen Half the Inſtances of this Waſte which I have in *Yorkſhire*, you will execrate the Cuſtom. When an Hay-ſtack is thus miſmanaged, no Wonder if the Farmer has little or no Hay to ſpare for his breeding Sheep, fatting Wethers, &c. &c.

Of Wintering without Hay, &c. &c.

A *BAD*, but *natural*, nay, *neceſſary* Conſequence of this Syſtem is, that much more Graſs Land muſt be allotted for Sheep than otherwiſe need be. If Sheep be confined in Winter to Ground which will juſt keep them in Summer, they muſt be in Danger of Starving, and of Devouring the very Roots of next Summer's Graſs. Beſides, here will be no Spring-Graſs for the new-yeaned Ewes and their Lambs, or for the Wethers, to be forwarded for the enſuing Summer's Feed. As in other Inſtances, ſo in this, one Evil draws on another! The Farmer who depends on Graſs alone for his Sheep, muſt either ſtarve them, or have a large Proportion of Paſture. He immediately diſcerns the former Part of the Option to be *ruinous*, and therefore adopts the latter; and perhaps applauds himſelf

as a good Manager, if he keeps his Flock in tolerable Plight without Hay; not conſidering how much of the Summer Crops of his Paſtures or Meadows the Sheep devour in the Spring.

Beſt Syſtem of Wintering Sheep.

TO me it appears a moſt evident Truth, that without Adopting Mr. *Young*'s Syſtem of Providing green Food for a Part of Winter and for all Spring, ſuch as Turnips, Cabbages, &c. or early Graſſes, ſuch as Burnet, &c. it is ſcarcely poſſible to keep any Flock of Sheep with Profit, nay, without conſiderable Loſs.

Turnips.

IN all this Tract of Country, (and particularly in the Lordſhip under Queſtion) I have never ſeen one Turnip, except in Gardens. Yet it is a Fact well known, (and chiefly from Mr. *Young*'s ſeveral Tours) that Turnips will grow well in a clayey Soil, and be ſucceeded admirably by a Barley Crop. *Norfolk* and *Suffolk* are at no great Diſtance from us; and yet ſo little have We profited by the Turnip Culture of thoſe Counties, and of *Leiceſterſhire*, where Turnips flouriſh on Clays, that our Farmers are deaf to all Tales of this great real Improvement, although they are diſtreſſed as much as any Men in the Kingdom for Spring Food, and in many Springs, as well as this, know not how to purchaſe Hay, their only Dependance. Yet this very People are great Growers of Barley, which ſucceeds Turnips ſo well, and make

make it the ſtaple Food of Nine-Tenths of the Houſeholders, nay, Ninety-nine-Hundredths.

It muſt be obſerved, that Turnips ſhould not be fed upon clayey Ground, but carted off; as otherwiſe, the Treading of the Sheep and other Cattle will condenſe the Ground, inſtead of making it lighter for a Barley Crop. The Benefit of Eating the Turnips on poor Paſture or Meadow Ground will inable the Farmer to give an Equivalent of Home-Manure to the Turnip-Ground.

In my own Opinion, all Turnips carted off ſhould be boiled and given in Veſſels to whatever Stock they are deſtined for; as by giving *looſe* Turnips on the Ground, great Waſte is committed.

Of Cabbages.

Notwithſtanding the various, juſt, and loud Encomiums of this Plant (chiefly in Mr. *Young*'s ſeveral Tours) no Cabbage is grown in all this Country, except in Gardens; and yet the Succeſs there might tempt our Farmers.

If a Summer's and Winter's Fallow do not pulverize the Soil of our Clays ſufficiently, an additional Winter one to begin with, certainly would. It appears (inconteſtibly I think) from Mr. *Young*'s Collections of Facts, that a ſucceeding Crop of this Plant, when properly managed, may both be of more Value than a preceding, and bring that Ground into better Order. How can our Farmers, who feed large

Oxen, and want Manure, longer delay to try this Plant, under the loud Call of Experience!

I muſt note, that in 1769 I ſaw a Crop of Cabbages belonging to Mr. *Hewit*, Tenant to C. Turner, Eſq; at Kirkleatham. The Fore-end of that Summer was droughty, and thoſe Cabbages were never watered, and I thought them likely to prove a very indifferent Crop. Let any one look at their Succeſs, as recorded in Northern Tour, Second Edition. I cannot doubt the Authenticity of that Account; and whoever ſaw the Crop, and believes that Account, cannot doubt a Moment of the Expediency of the Culture in general.

Of Carrots.

IN the Lordſhip under Queſtion, are in ſome Parts fine deep Sands, which promiſe to pay nobly for Carrots; a real Improvement.

I am reſolved to try the Experiment which Mr. *Young* ſuggeſts in his Eaſtern Tour, viz. the Tranſplanting of this Root; as, if it ſucceeds, it promiſes to ſave much Expence in the Culture.

Of Cole-Seed.

MR. YOUNG, excited by the propoſed Premium of the Society of Arts, &c. has tried ſome Experiments on this Plant, committed them to Writing, and obtained the Reward. His Experiments give no Room to hope much Succeſs from its Culture. However, he is ingenuous

ingenuous enough not to condemn the Plant to Neglect on Account of his own Want of Succeſs, as this may have been owing to peculiar Circumſtances, as indeed it ſeems. I have had authentic Accounts of the great Value of it as Sheep-Food in your Fens; and in my Pariſh of *Morborne*, Mr. *Thomas Beal*, an excellent Farmer, has yearly Proofs of its Goodneſs both in feeding his fatting Wethers, and forwarding his choice Store Sheep. This Plant has made its Way into the Lordſhip of *Leighton*, a lately incloſed one, adjoining to my Pariſh of Buckworth, and from my Obſervations on this very ſucculent Plant it promiſes great Advantages by its Culture. I doubt not, that the Raiſing of Rents in the Lordſhip of ——— a great Sheep-Manor, will introduce it there.

Of a Second Syſtem of Wintering Sheep.

BUT next to this *beſt* (nay *only good*) Syſtem, is that of keeping a Flock of Sheep in Spring, chiefly on Hay. The Ewes will not milk with Hay chiefly, nearly ſo well as with green vegetable Food or artificial Graſſes: yet great Benefit may be made of the Folding of Sheep, when thus kept almoſt intirely on Hay, whether they be confined on Arable or on poor Paſture or Meadow, and the Saving in the Crops of Paſtures or Meadows from which they are debarred, will be very conſiderable. Sheep certainly do not admit with Safety and Health of cloſe Folding in hot Weather: but they may without the leaſt Harm be kept in very cloſe Bounds during Spring. Let any one read attentively the Profit to be obtained by Folding, even where Bedding

is purchaſed, as Mr. *Young* ſtates it, fairly (I think) and he will be of this Opinion.

I muſt, Sir, on this important Article of Sheep be allowed to add another Obſervation or two, not without an Eye to the Management of this Neighbourhood.

Experiments of Salving Sheep recommended.

IN the firſt Place I wiſh, but ſhall not adviſe, the Farmers of the Lordſhip which we examine to try the eaſy and unexpenſive Experiment of Salving a few Sheep. The Shepherds on our *Yorkſhire* Wolds are certainly among the beſt in *England*. From them we in the Lowlands adjoining have learned the Practice, and find it attended with ſuch Succeſs, that I believe none who try it, deſiſt. It ſeems indiſputably followed with three conſiderable Advantages: for, firſt, it preſerves this uſeful Animal, the Sheep, from that very pernicious Diſtemper the Scab, and in many Caſes and Degrees cures it; ſecondly, it increaſes the Bulk or Weight of Wool, and hardly at all hurts the Colour of it, if good Waſhings, or perhaps an extraordinary one, be given; thirdly, it contributes amazingly to preſerve the Sheep from the Pelt-Rot and other bad Effects of Lying Wet, and therefore ſeems peculiarly proper for our clayey, conſequently wet Lands in this Neighbourhood.

Let any Farmer put into his Winter Grounds two equal Lots of Sheep, one *ſalved* and the other *unſalved*. Let him weigh the Wool of each, and note its Price. Let him alſo feed the

Lots

Lots in the ſame Paſture, (allowing for Death and Accidents of Lameneſs, &c.) and note their Price when equally fat. After the Expence of Salving, both Materials and Labour deducted, he will learn by the Difference of Profit the better Method. Salving ſeems a neceſſary Method of Treating Sheep which go on common Paſtures or in common Fields, as they are almoſt unavoidably liable to a Taint of the Scab.

Of Proviſions for early Lambs.

IN the ſecond Place every Farmer ſeems ſenſible of the great Advantage of his Lambs getting a Month's Start of his Neighbours; yet his Objection to ſecuring that Advantage, is, that "Springs with us (although Southerns,) are generally late and pinching, conſequently pernicious both to the Dam and Young." I think the Obſervation juſt, but no Objection to the Practice of Procuring Lambs a Month ſooner than uſual. The Point of beſt Management of Sheep in this Neighbourhood, is the Choice of Rams: Some Farmers ſcrupling not to pay 10 or 15 Guineas for the Loan of one for a Seaſon, and putting to him only ſixty or eighty Ewes. Yet they ſeldom or never put theſe Ewes to ſo expenſive a Ram conſiderably earlier than their Neighbours do to the worſt. Now if Farmers who have good Ewes and wiſely go to the Price of Hiring a choice Ram, would lay out a Sum equal to that of the Loan of the Ram, in preparing Sheds and artificial early Graſs, or proper Roots for his ſixty or eighty Ewes and their Lambs,

Lambs, he might obviate all the Inconveniences from bad Weather, &c. in late Springs, and ſafely procure Lambs a Month ſooner than ordinary: his Sheds would want little or no Reparation, and he would probably be repaid by the Growth of his Lambs, eſpecially of his Ram-Lambs, the very firſt Year, moſt eſpecially as it is known, that theſe Lambs may * ſafely be put to a few Ewes in the ſucceeding Seaſon, and a Month's Start to ſuch muſt be very conſiderable.

I don't doubt (from Mr. *Young*'s Calculation of Bedding with purchaſed Litter,) that the Houſing of Ewes and early Lambs might be repaid by the Benefit of their Dung.

Of the beſt Age of feeding Sheep.

I WISH this important Point to be determined by Experiments. The Farmers in this Neighbourhood generally feed off their Wethers at two Shear, (as they call it) that is, in the Summer ſucceeding their being full two Years old: but the moſt ſenſible Farmers among them, with whom I have converſed, agree that theſe Sheep

* To fifteen or twenty, i. e. half the Number uſually put to a grown Ram, as Experience teaches. If we may believe the Aſſertions of the beſt Ram Breeders, their is a moſt critical Work. They agree, that a Man may not uſually expect above one or two thorough-good Ram-Lambs from all the Ewes, however good, which he puts to his higheſt priced Rams. No wonder then he is careful of ſuch Lambs. Each may be worth twenty or twenty-five Pounds. But then he has the Advantage of fine Ewe-Lambs, and of good Wether-ones.

Sheep generally pay better when three Shear. Of this Point I myſelf have no Doubt: inſomuch that I am perſuaded, Wethers in general, eſpecially the larger Sort *, can ſeldom be got fully fat when only two Shear. The only Point which I doubt of, is, whether they may not pay better, at leaſt in ſome Caſes, when kept till full four Shear.

I am told indeed by an experienced Judge, that a thrice-ſhorn Sheep will carry both as much Wool and as much Fat on his Back at the Age of three Shear as at any. Conſequently, this Age ſeems the moſt advantageous for the Farmer to part with him at, as his Wool the next Year is not likely to pay for his Keeping. But then the ſame Judge allows, that his three Shear Wethers will carry more Tallow in the ſucceeding Year. The Point to be determined then is, "Whether the accruing Tallow with his Wool will inable him to pay for his additional Year." Probably it may not: but the Point is deſirable to be determined by Experiment.

It is a Point generally agreed, "No Animal feeds kindly and advantageouſly, till his Growth ceaſes;" for a plain Reaſon, viz. "His Nouriſhment is employed, partly at leaſt, in increaſing his Size, not Fat." Inſomuch, that many Times a young Swine will not feed at all. If then a Sheep feeds *beſt* and *moſt kindly* at three Shear; we muſt conclude, that he has finiſhed his Growth in the preceding Year; which he ſeems not to the Eye to have done.

One

* Sheep called Fallow, *i. e.* which go in common Fields, are uſually kept a Year longer.

One Obſervation more on this Subject I muſt add.

No Perſon who has Taſte, can doubt that the Mutton of a four Shear Sheep is preferable to that of a three Shear Sheep (*cæt. par.*) I believe, that moſt Gentlemen, who kill their own Mutton, chooſe for this very Reaſon to kill them at four Shear rather than two or three. If then a Butcher has Cuſtomers of Taſte, he may well afford a better Price for Sheep of four than of three Shear; and hence ſome Farmers may have a Motive to keep their Sheep a Year longer than uſual.

One Farmer, rather curious, hath introduced into this Neighbourhood a *Wiltſhire* large-horned Ram, to which he puts about ſixty round-made Ewes of this County's Breed. I am told that the Lambs produced by this Croſs are likely to be the beſt Feeders. I ſuppoſe this Property muſt proceed from the *Wiltſhire* Sheep arriving ſoon at their Growth. Whatever Animal comes naturally to a large Size, and is of great Bone when young, cannot feed kindly when young, for obvious Reaſons. Our northern Shepherds have a ſtrong Notion that the Lambs of horned Sheep are lambed with Difficulty, and would ſtand in Terror for their Ewes at the very Sight of this *Wiltſhire* Ram, believing, with the Poet, that "He proffered Death in Proffering to "enjoy."—But this Gentleman Farmer either *knows* that this is a vain fear, or *ſuſpects* it to be ſo. As Lambs of the horned Kind are lambed without any Sign of Horns, if there be any

Truth in the Fears of our northern Shepherds, it muſt ariſe from a different Form of the Head of the horned Sheep from that of the humble Kind *.

Of the beſt Age for killing Bullocks.

THESE Reflections, Sir, ſhould be extended to Beef.

Our *Yorkſhire* well-drawn (not *over-drawn* or *ſurfeited*) Bullocks when five, ſix, or ſeven Years old afford Beef, when fed, *perfectly-marbled*, the Fat being diſtributed in the Veins; whereas a three Years Bullock undrawn lays his Load of Fat on, more quickly perhaps, but in Lumps. The Farmer however, eſpecially if he have a Rack Rent to pay, muſt feed his Bullocks when they will pay beſt, which muſt be earlier in any Country where an Ox is not drawn, as he there pays nothing for his Meat by Labour. In this Neighbourhood the abſurd Prejudices againſt an Ox-Draught are as ſtrong perhaps as in any Part of the Kingdom.

Of Ox-Draughts.

ON this important Subject I muſt be allowed to add a Word.

* It is a general Obſervation, that the further northwards we go, the more *Sheep* reſemble *Goats* in Wool and Horns; but the *Wiltſhire* Rams are plainly an Exception.

A conſiderable Part of my paternal Eſtate in Yorkſhire was occupied by my Parents, who changed the Ox-Draughts which Tenants had uſed into Horſe ones, but returned to the old Cuſtom through Conviction, and for many Years kept ſix or more Pairs of Oxen of their own Breed. In my Youth I had full Opportunity of ſeeing the Effects of theſe oppoſite Meaſures, and can averr the following Truths confirmed by all my Obſervations ſince; firſt, in any given Soil Oxen do all Kinds of Horſe Work, much cheaper than and equally well with Horſes. Secondly, Oxen well ſhod do all Road Works in Countries not very hilly * much cheaper than and equally well with Horſes, except in Droughts, when the Sand is apt to hurt their Lungs and Eyes. Thirdly, Oxen ſeem to do better in Harneſs and Collars than in Yokes, and ſingle than double. Fourthly, Oxen properly uſed will pay for their Work, and leave all the Profit of their Growth clear Gains.

Of Wool.

I MUST, Sir, add a Word on this Staple Commodity of our Nation, although you probably underſtand it better than myſelf.

It ſeems an indiſputable Truth, that the Value of Wool has for ſome Years been declining,

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* In hilly Countries no Draught can well be uſed. The going down ſteep Hills is as prejudicial to Horſes as Oxen. In Shropſhire, &c. ſingle Horſes are uſed for carrying out Corn, &c.

ing, and is ſtill likely to decreaſe. Perhaps the Wool in this Neighbourhood is not fit for the *fine*, or (as you call them) the *ſuperfine* Cloths, and certainly not for the coarſe. But the Complaint ſeems to extend to the Nation in general. I know it to extend through my large native Country, where we have ſo many manufacturing Towns, and the Expence of Carriage to them muſt be much leſs than to diſtant ones, and the Wool and Manufactures will naturally be brought to agree. Does not this very general Complaint ſeem to deſerve a parliamentary Inquiry into the State of our Woollen-Manufactures? In the mean Time, does it appear to indicate that we have too much Ground occupied by Sheep? On the contrary, the high Price of Mutton as well as Beef, ſeems to indicate that this is not the Caſe on the Whole.

Of the high Price of Mutton.

THE late exorbitant Price of Mutton in *London* appears however to be the Effect of Monopoly by the Carcaſe-Butchers. An eminent Farmer aſſures me that at the very Time when Mutton ſold at the late exorbitant Price, the Bills returned by his Factors ſhewed the beſt to give only 4 *d.* or 4 *d.* ½ per Pound at the firſt Market. I believe, the retail Butchers ſcarcely get Bread, allowed by the Carcaſe-Butchers. When wiſe Laws are in Force againſt this Monopoly, are our executive Powers of the Legiſlature aſleep? Let it not be pretended that "the Carcaſe-Butchers are a *neceſſary Evil.*"

Schemes may eaſily be formed, which ſhall inable the retailing Butchers to be the *original* and *ſole* Purchaſer.

Of Corn-Land.

THIS Subject is ſo cloſely connected with *Sheep-Land*, that as one *increaſes*, the other ſeems neceſſarily to *decreaſe*.

I think it is a Fact ſcarcely to be doubted, that we have not Land enough under the Plough to ſupply us, (the Chance of Seaſons conſidered) with a Competency of Corn for Home Conſumption, much leſs for free Exportation without Bounty. I well know what bad Management of the Plough is almoſt every where to be found. I will give you *one* Inſtance which may ſtand inſtead of a thouſand. In my Pariſhes I accept of what is rather an *Acknowledgement* than an *Equivalent* for my Corn-Tithe, viz. 2 *s.* 6 *d.* per Acre for Wheat. The Mother of a Farmer in one of them (who rents nearer 300 than 200 *l. per Annum*) avowed that her Son's Crops were not, on an Average, worth the Reaping, and this Acknowledgement for Tithe; and ſhe was by many Perſons believed to ſpeak Truth. Think, Sir, what a Loſs to the Public is here ſuſtained!

I ardently wiſh to ſee a Reformation of *all* the bad Methods of Agriculture, which are not only *Diſgraces* but *heavy Loſſes* to the Nation. I hope that the better Methods of real Improvements propoſed and inforced by Mr. *Young* (and a few other Gentlemen) will in Time have their Effect, and bring about a conſiderable Revolution in our agricultural Syſtem, and I ſhall be happy

to

to contribute to haſten it by any Efforts in my Power. In the mean Time I muſt be allowed to think, that we have not nearly a ſufficient Quantity of Ground under the Plough.

I ſhall not be miſunderſtood to wiſh that the *good* Farmer, the ſkilful and induſtrious one, ſhould not be paid a ſufficient Price for his Corn: as on the *Certainty* of that, his Encouragement to grow much Corn, and ſecure us a reaſonable Plenty, muſt depend. But is it not a great national Diſgrace, that after ſuch an Harveſt as the laſt was publicly averred to be, we ſhould be neceſſitated not only to *forbid Exportation without Bounty*, but even to talk with Exultation in *February*, and to hope that a *Bounty* for *Importation* will be given *?

I have always been, and ſtill am, a warm Partiſan for Incloſures as a public Good, (altho' as an Individual I am a Sufferer by the Iniquity of Commiſſioners.) I remember, that two general Objections againſt them were, firſt, that "the Breed of Sheep muſt decreaſe in Conſequence of them, and conſequently the Woollen Manufactures periſh;" and, ſecondly, that "Corn would become ſo cheap, that we muſt pay an high Bounty to take it off our Hands." After ſuch numerous Acts for Incloſures paſſed every Seſſion of Parliament, behold! "the Price of Wool declines conſiderably, and that of Corn riſes!"

Every intelligent Perſon knows, that the Nature of Grounds incloſed are oppoſite. Common

* This Meaſure is known to be ſince carried into Effect.

mon Corn-Fields incloſed are naturally converted into Meadows and Paſtures, and Sheep-Walks gain Ground: but when Heaths and Waſtes are incloſed, they as naturally are converted into Corn-Fields, and muſt increaſe the Quantity of Corn grown, at leaſt for ſome Years. How to improve Heaths and Waſtes, Mr. *Young* has excellently taught the Public, and every true Patriot ought to contribute to carry theſe Improvements into Execution.

On one Side I apprehend that few Gentlemen's Rents are advanced ſo faſt as the Neceſſaries of Life are: and on the other, that many Rents are raiſed beyond what the Tenants can pay and live comfortably. This melancholy Event may, and probably does, ariſe from a great Variety of Cauſes; from *Ignorance*, bad *Habits*, and *Obſtinacy*, &c. in both Parties, Landlord and Tenant. But the chief is certainly Want of Judgment to know what is the conjoint Intereſt of both Parties, which is always that of the Public alſo; and this will be the Caſe when *ignorant* Surveyors and Valuers of Eſtates are employed, almoſt as much as when *diſhoneſt* ones are.

Of Fencing.

LET me, Sir, conclude by hazarding a few Reflections on Fencing.

The *out* Fences and ſome of the *in* ones in the Lordſhip which we have ſurveyed, are quick ones: but many (far too many) are intirely dead ones. Conſidering the Oldneſs of the In-

Inclosure, such large Fields as of 100 or 120 Acres, should not have been now found in it, and all necessary Fences should have been quick ones. On the present Advance of Rent, surely, this real Improvement will take Place; and Farmers who mean to continue on their Lands, will learn one Truth, which a short Experience might teach, viz. that "dead Hedges are much more expensive than quick ones."

Quick Fences here are maintained by Splashing; and I must observe some Defects which occur to me in the Method of this Country.

In the first Place, the Farmers suffer their White-Thorns to run to an immense Size of Top; an unavoidable Consequence of which, is, that as the *Thickness* of the Top increases, in the same Proportion exactly the *Thinness* towards the Bottom increases, consequently the Goodness of the Fence decreases; and in many Instances, which I daily see, the Thinness of the lower and most considerable, nay only considerable, Part of the Fence, is such, that the Usefulness of the Fence is scarcely likely to be recovered without intirely cutting down the whole Fence, that is, Springing it anew.

In the second Place, as the Farmers suffer their White-Thorns to run to these immense Tops, they seldom do any Thing at their Ditches; that is, never except when they splash their Hedges; consequently their Ditches are deluged with Wet, and the White-Thorns are strongly coated with Moss, and have not, towards the Bottom, any Thing that can properly be

called a *Spine* or *Thorn*, the true Security of theſe Sort of Fences.

In the third Place, when the Farmers ſplaſh their Hedges, in order to make them a ſufficient Fence, they cut their *Uprights* or *Standards*, as high as five or ſix Feet, and their *Splaſhes* twice as long; the Conſequence of which Management is, that the Sap being to be diſtributed through ſo great a Length, cauſes very poor and very weak Shoots to ſpring in any Part of it, and the new ſplaſhed Hedge, not only in the firſt Year, looks much more like a *dead* than a *quick* Fence, but even continues ſo to the ſecond and third Years; and in ſhort, when the *dead Part* falls away, the quick is not ſufficient to ſuſtain itſelf, and either the dead Part muſt be renewed with great Inconvenience and Expence, or the whole Fence muſt remain inſufficient.

In the fourth Place, our Neighbours have changed the Methods of their Fathers with Regard to the Imployment of the Matter ſcoured from the Ditches. Their Fathers laid the beſt of that Matter to the Roots of their Thorns, to warm and nouriſh them: but the Sons leave theſe Roots bare, and throw all the Scourings on to the outward Bank. The Pretence is, that the higher the outward Bank is made, the more ſecure the Fence becomes: but Cattle in the adjoining Grounds will venture to the Hedge, eſpecially Sheep; and the Bank being of looſe Earth, however high, tumbles in, ſo that the Ditch is ſoon refilled *. Hence the Cuſtom of an outward Fence creeps in daily.

In

* The Ditch is ſo ſtrait at Bottom as to fill up faſt,

In the fifth Place, I adviſe the Bank on which all new quick Hedges are ſet, to be made higher than the old have been. By this Management many Advantages will be gained. Firſt, the Plants will have a deeper Bed, into which to ſhoot the Roots, which require much Nouriſhment; ſecondly, the Ditches on both Sides, (for they ſhould be double,) will lie dry; thirdly, the Hedge when ſplaſhed, may be cut much nearer the Ground than it now is, and remain a ſufficient Fence; and fourthly, it will grow again much quicker and ſtronger and thicker.

I will conclude this long Letter, Sir, by an Obſervation on one Method of raiſing quick Hedges of White-Thorn (in this Neighbourhood, eſpecially your Relation's new Incloſure at *Woolley*) which I take to be very erroneous; viz. planting two Rows of Sets inſtead of one, and the Plants in each Row very cloſe. The Roots of theſe muſt neceſſarily intangle and retard each other's Growth, and, in Fine, ſome muſt live at the Expence of the others, which have however done them much harm. Almoſt every good Set properly planted will take ſufficiently. The great Point in raiſing a White-Thorn Hedge is to nouriſh ſtrong Stems ſufficient for the future Fence, which a few are, and then to make them ſpread; and as the Root requires much Nouriſhment, not to let it be impoveriſhed by bad Neighbours.

I am, dear Sir,

Sincerely your's, &c.

T. COMBER.

P. 42, Note, l. laſt, for *long-horned*, r. *baſtard long-horned*.

POSTSCRIPT.

I LOOK upon the Raiſing of a good White-Thorn Hedge as a Matter ſo important, as to deſerve to be preſſed on the Minds of thoſe who wiſh to make *real Improvements*. I muſt therefore be allowed to hazard a few more Reflexions on that Part of Huſbandry.

1. The Method of ſetting *old thick* Setts of White Thorn was long purſued as a ſure Method of quickly effecting a good Hedge: But Experience taught Practitioners, that they could not depend on the Thickneſs of the Stems of their Setts for Quickneſs of Growth of their Fences, but rather the contrary; as many of theſe were ſtunted in their Growth, and young ſmall Setts ſoon overtook them in Growth and left them. It has therefore been a Practice for ſome Years, over all the Kingdom I believe, to ſet no Thorns but ſuch as had young ſmall Stems; and in general the Method has ſucceeded well.

2. But now we ſeem running into the Extreme contrary to the old, as it uſually happens, and Setts too ſmall are now frequently planted. There muſt be a Medium which is the propereſt Size for Setts of White-Thorn; and he who plants as ſmall as I have lately ſeen, will certainly be one Year backwarder in the Growth of his Hedge than his Neighbour who ſets ſtronger Wood, although they may grow well, as well in Proportion.

3. I muſt own myſelf an Advocate for planting Quicks in a ſingle Row, having this Foundation in Theory, that the Roots of Thorns ſet in double Rows near each other will certainly *encounter* and *retard*, if not deſtroy, their mutual Progreſs; and the Confirmation in Practice in *Yorkſhire*, that ſingle Rows make a fine Hedge both in *channelly* or *gravelly* and *clayey* Soils.

4. But another and worſe Error is, the Setting of Plants thick in the ſame Row. Walking lately by the new Incloſure of your Relation at *Woolley*, I was amazed at the Thickneſs of the Plants in the Line, and laid down my walking Cane at Random in two Places, and found thirteen Setts in its Extent in one Place, and fourteen in another, although my Cane is of the uſual Length. Before I finiſhed my Walk, I met a pretty judicious Farmer, and aſked him at what Diſtance the Plants ſhould ſtand in the Line, and he anſwered, At about the Diſtance of ſix Inches. I think this too cloſe Planting: But on this Plan the Rows at *Woolley* are ſet twice too thick; and the Rows being *double* inſtead of *ſingle*, three-fourths of the Wood are waſted, and worſe than waſted; for they do Harm inſtead of Good.—When ſuch a Superabundance of Wood is employed, who can wonder that the Price of Quickſets is raiſed ſo extravagantly as they are in ſome Parts of the Kingdom! It is ſaid, that the Growth of this Commodity for ſome late Years has not anſwered by any Means to the Demand, and that the Hips have been ſo poor a Crop of late, that future Incloſures muſt be delayed, till a Supply of Quickſets can be procured. Who can wonder

that ſuch a Waſte as this, which is juſt now mentioned, ſhould be followed by Want! The Quick-Seller encourages the Sale of more than are wanted; that he may inhance the Price of what remains on Hand. The Quick-Setter recommends the planting of more Sets than are wanted, that he may be better paid for extraordinary Trouble; and thus the Quick-Grower is chouſed out of his Money, and pays for what he had better want.

5. The propereſt Time for planting of Quick, is much diſputed. The Generality of Planters, are for planting early in Spring; but Experience will ſoon teach them, that when Froſts continue ſo long as they uſually do, and ſo late as they continued in this Spring particularly, the Roots and Life of their Plants will ſuffer greatly; and if they plant them late in Spring, the dry Weather will frequently kill this Plant, which naturally ſhoots early. Experience will ſhew that the beſt Time of planting White-Thorn, is betwixt *Michaelmas* and *Martinmas*, but then a Quantity of ſhort half decayed Litter ſhould be laid along the Line, as in Gardens on many Beds. By this Means the Roots of the Plants will be preſerved from the Froſts, and take eaſily, and ſhoot vigorouſly; and in the enſuing Summer the Earth, eſpecially if clayey, will be preſerved from baking by Sun and Wind, and Moiſture will be preſerved. The Progreſs of the Plants in the firſt Year will amaze the Planter.

6. Good Weeding in the firſt Spring, or rather Summer, is eſſential to Succeſs of the Plants; and

and if the Summer be droughty, a Line of freſh Litter will coſt a Trifle in Expence, and effectually prevent the Drought's hurting the Roots; or if it be very violent, one Watering, but a plentiful one, with a Watering-Pan, will preſerve the Roots from any Damage, and the Litter will preſerve the Moiſture from being exhaled by the Sun.

7. It is a common Miſtake, that young Quicks ſhould be long preſerved from Sun and Wind. If they be preſerved, as above directed, the firſt Summer, they will be ſo far from wanting Shelter any longer, that the more they are expoſed to Air, that is Wind, (except on bleak Heights,) the better.

8. The Time of Shortening the Stem, by cutting down the Quicks, as it is called, muſt be determined by Circumſtances, chiefly the quick Growth of them. Moſt People perform that Operation after the ſecond Year; but I am inclined to think this too early a Period; eſpecially if the Quickſets be ſmall. To cut down the main upright Stem before it has gained a good Size, in order to make it ſhoot laterally, is counteracting Nature, and the Deſign of Planting a Quick-Hedge. This Point ought to be determined by Experiments.

9. I adviſe no young Trees of any Sort to be ſet in the Line of Quick-Wood. The Quicks are apt to ſmother them, and they, when grown up, ruin the Fence. If a Planter will have Trees near his Hedges, let them be ſet when of 10 or 12 Feet high, and at ſeveral Feet Diſtance from the

the Quicks, and well fenced off. The Roots of Trees when ſtrong deſtroy the Quick-Wood; and when themſelves are felled, they commonly deſtroy the Fence in which they ſtand, and irreparably.

10. As I adviſe not to plant any Trees in the Line of Wood, ſo neither can I adviſe to plant Haſſels there; theſe make not a Fence comparable to that of White-Thorns, and tempt Boys to break it down, in order to get the Nuts. The Wych, which is ſo common in this Neighbourhood, makes a bad Fence, and inſtead of being encouraged in new Plantations, ſhould rather be extirpated from the old.

On the Whole, it is much to be wiſhed, that the honourable Society for Arts, &c. would offer a Premium for Experiments on Setting of White-Thorns of *different Thickneſs* in the Stem, at different Diſtances in the ſame Row, of ſingle and double Rows, and at different Times of Planting, alſo on different Soils; ſo that the beſt Method of this important Work might be determined by Fact.

I declare freely againſt all Kinds of Trees in Hedge-Rows, as they greatly contribute to break the Strength of the Fence by affording Places for Treſpaſſers to climb at, as they ſhade Crops of Corn, and lodge Birds of Prey, as their Roots are pernicious to thoſe of the Thorns in the Hedge, and as they are incommodious to the Plough.

I ad-

I adviſe much rather to plant Trees of whatever Sort the Proprietor chooſes, in a Corner of his Field or of his Eſtate, and in Proportion to the natural Wants of that Field or Eſtate. Wood is ſo neceſſary to every Poſſeſſion of Land, that the latter muſt be very imperfect without it. Many a Land-Owner is ignorant how valuable his Wood-land is, and how much *real* Rent it brings him in, if properly managed, although it may only ſupply the natural Wants of the Farmers, and he receive not one Penny directly as Rent from it. My Pariſhes afford a ſtrong Proof of this important Truth. In one of them, the ſmalleſt Farmers have ſufficient Wood for Fencing of all Kinds; and in the other, the greateſt Farmers are obliged to buy all they want. In this latter Pariſh, one Farmer expends this very Year *61.* for Wood for Fencing, and is obliged to lead it ſome Miles, probably; which may amount to a Sum of equal Value, when the Seaſon in which he leads it is conſidered. Let a Landlord conſider alſo what he ſaves by Wood for Repairs, and he may eaſily ſee this Truth in its full Light. A Landlord who has no Reſource, may be neceſſitated to permit his Hedge-row Trees to become Pollards, in order to ſupply his Tenants with Stakes; but he who has a Wood, will, in common Prudence, reſtrain his Farmers from Defacing theſe beautiful Parts of the Creation, finely branching Trees.

Of Feeding with Oil-Cakes.

THE prime Graziers in my Pariſhes continue the Practice of Feeding Oxen with Oil-Cakes;

Cakes; and yet the Price is raiſed from 2 *l.* 10*s.* *per* Thouſand, to 10 *l.* 10*s.* If the Practice be ſtill profitable, as they confeſs, what muſt it have been? It is, however, alledged, that the Manure from this Food is ſo valuable as to be alone a ſufficient Profit. Mr. *Young*'s Eaſtern Tour ſeems to evince the Truth of this Poſition. What would our Fathers have ſaid to the Prediction, that their Sons would judge the Dung from Oil-Cakes a ſufficient Profit for Feeding Oxen with that expenſive Food!

TO

DR. HUNTER,

PHYSICIAN in YORK.

Buckworth, Hunts,
March 17, 1772.

SIR,

I Am obliged to you for more than one Civility, which (I am afraid) I have not ſufficiently acknowledged.

The firſt Favour which I received from you, was a Preſent of your *Georgical Eſſays*; which I am the more obliged to you for, as I had not the Pleaſure of being perſonally known to you, and could only merit that Civility by my known Attachment to the Intereſts of Agriculture. I acknowledged that Favour in ſuch a Manner as my Hurry (when my Foot was in the Stirrup for *Cambridge*, in order to keep an Act in Laws) would allow.

At my Return thence, I was favoured with a ſecond Letter from you, in which you aſſure me, that although you are the Author of a late Piece, ſigned *Mago*, you are not the Author of a former one with that Signature, in which you think I had Reaſon to complain of ungentlemanlike Treatment. My important

Change of Situation in Life, the Buſineſs of removing a large Family to a very diſtant County, and the Series of bad Health which I have ſince had, (inſomuch that I have felt two Strokes of the paralytic Kind, which affected both my Speech and right Hand, and for ſome Time deprived me of the Uſe of the Pen, and cauſed the Injunction of an eminent Gentleman of your Faculty, who forbade me Books, Pen, and Ink) muſt be too ſufficient an Apology for any ſeeming Neglect of your ingenious Letter.

Although I had not known the former *Mago*, I ſhould never have ſuſpected Dr. *Hunter* to be that Writer. In you, Sir, I recognize the Gentleman, and know you to be too well acquainted with my *real* Character, to be capable of making your Pen the Inſtrument of propagating ſuch Invective as that Writer's has been proſtituted to. In order therefore to teſtify, Sir, my Conviction of Dr. *Hunter*'s being a Gentleman, and an Ornament to his Profeſſion, I now chooſe to addreſs to Him ſuch an imperfect Account as I can obtain of a Diſtemper among Sheep, very dreadful to every Lover of Agriculture, and which will deſerve his Attention for the public Good.

Till I came to ſettle in this County, Sir, I never heard of this Diſtemper, either by its particular Name, or its general Deſcription; although it appears to be ſuch as muſt render Sheep a much more precarious and dangerous Stock than they have hitherto uſually been thought.

I never

I never read of it in any Writers upon Sheep. I confeſs I have not *Ellis* at Hand, and from what I have ſeen of his on the Subject of Sheep, I ſuſpect that among his voluminous, but uſeful Works, ſomething on this Diſeaſe might be expected, if he knew any thing of the Malady.

I never heard a Syllable about it from our *Yorkſhire* Farmers, many of whom are very knowing in this valuable Animal, the Sheep.

Yet in this County I find that this Diſeaſe is very generally known by Sheep-Maſters, either from their own ſad Experience, or from the Relations of their complaining Friends. It is diſtinguiſhed by a peculiar Name, the *Rickets*, very different from what we know in *Yorkſhire* by the Name of either * *Water in the Head*, or *Crook* †. It appears to be much more formidable than the *Scab* or *Rot*, as thoſe Diſtempers being now well known, many ſucceſsful Remedies for them are applied; whereas this continuing unknown in its Cauſes, not one Remedy is applied with Succeſs. Many Farmers in this County, &c. have loſt by it ſeveral Hundreds of Pounds.

* Υδροκεφαλος. This Diſtemper, called the *Giddy* in Yorkſhire, and *Dizzy* here, from that Circumſtance of the Sheep's Turning continually one Way, is cured, but very ſeldom, by cutting the Head, and taking out the Bladder of Water, as I am informed by a credible Farmer, who has once effected the Cure.

† I am not ſatisfied that this is a Diſtemper diſtinct from the Υδροκεφαλος, but I apprehend it ſo to be, and to have its Seat in the Neck of the Sheep.

I did not find, Sir, that this Diſtemper is *infectious*; but alas! it is *hereditary*, and equally from Sire and Dam; and, like other hereditary Diſtempers, may lie latent one Generation (not more, ſo far as I hear,) and then revives with all its former Fury. So that when a Sheep-Maſter finds it in his Flock, he cannot with any Prudence breed any longer out of that Blood, but muſt quit them all to the Butcher, if he can make them ſaleable for the Knife; as it would be highly criminal to diſpoſe of ſuch Flock for Brood to any Man.

As Sheep-Maſters in this and many other Counties, not only *ſell* but *lend* out their choice Rams at high Rates, they would be juſtly infamous, if as ſoon as they diſcover this Malady in the Blood of their Rams, which they *ſell* or *lend*, they did not advertiſe the Breeders with whom they deal. The Temptation to conceal ſuch a Malady in a Flock, eſpecially whence choice Rams are bred, is indeed great; but the Conſequence of an Attempt to conceal it, would probably be *Infamy* and a Proſecution at Law. It is indeed of great Importance to the Public, that the Pedigrees of the high-priced Rams ſhould be kept with Exactneſs.

It is an incontrovertible Point, that whatever Sheep is once ſeized by this Diſtemper, never recovers; and it ſeems almoſt as incontrovertible, that whatever Sheep eſcapes it in his firſt Years, never takes it*. About a third Point

* Thus the Υδροκεφαλος ſeizes only Sheep of one or two Years old. The Rickets ſeize them about Spring, in the ſecond Year.

Point there is ſome Diſpute, viz. Whether very few of this bad Blood eſcape the Diſtemper. The general Opinion is, that very few do: But ſome Farmers of Senſe and Credit aſſert the contrary.—Theſe oppoſite Opinions may, however, probably be reconciled. In ſome Flocks, a much ſmaller Number than in others of equal Size may be ſeized by and die of this Diſeaſe, and this Difference may *really* ariſe from the unequal Numbers allied to the tainted Blood; for as it is ſometimes very difficult, or even next to impoſſible, to determine by what Croſs the hereditary Malady comes into the Flock, where exact Books are not kept, and diſtinguiſhing Marks are not obſerved, the leſs Prevalence of the Diſtemper may be aſcribed to a wrong Cauſe.

The Taint of this Diſtemper is not to be gueſſed at by any Symptom of not Thriving, &c. till it actually breaks out all at once; ſo that Sheep tainted with it, may be bought by the moſt judicious Shepherd as unliable to this Malady.

This Diſtemper is generally ſaid to be of about forty Years ſtanding in *England*; and the Shepherds of this County pretend to trace it from the neighbouring County of *Lincoln* hither. If this Circumſtance be true, it is at firſt Appearance a dreadful one; for if this Diſeaſe have had Footing long in that large Sheep County, it may be reaſonably feared, that it may have been tranſmitted by Multitudes of Rams and Ewes ſent for Brood into many Counties of *England*.

England. And yet one would hope that there is not much to be feared from that Circumſtance, as great Numbers of both Rams and Ewes have been brought into *Yorkſhire* from *Lincolnſhire*, and yet I never heard of this Diſtemper in our County.

This Diſeaſe is generally ſaid, Sir, to be a foreign one, and to have been imported from *Holland:* But I hear no direct Proof of this Aſſertion. The *Dutch* are indeed the common Carriers of the *European* World, and may therefore be as plauſibly charged with the Importation of a Diſtemper as any Nation can be. But I know not from what Nation within theſe fifty Years the *Engliſh* were likely to import Sheep to improve their Breed. Not from *France*, nor *Spain*, for obvious Reaſons; leaſt of all into *Lincolnſhire*, whoſe fine Breed would be hurt by a Mixture of theſe. As to the *Flanders* Sheep, I cannot be ſo poſitive: the *Lincolnſhire* Breeders are moſt likely to know this Fact. Probably this Part of the Story may be a Fable. We are ſo *national*, as to be unwilling to have any Thing bad thought *originally* ours.

It is certainly of much leſs Conſequence to know this Diſtemper's Origin as to Country, than its preſent State amongſt us; that if the Philoſophy, Sir, of you and your learned Brethren can aſſiſt us, a Cure may be found; and if not, that the Farmer may be taught by good Authority to give up vain Hopes of a Cure, and to quit the whole Breed as ſoon as poſſible, and not loſe Time and Money by vain Attempts after one.

I will,

I will, Sir, lay down a ſhort Deſcription of the three principal Stages of this dreadful Diſtemper, as they are given me by Mr. *Thomas Beal*, a principal Farmer in my Pariſh of *Marborne*. He is *attentive* and *intelligent*, and has loſt by this Diſtemper ſeveral Hundreds of Pounds; and appears to know as much of the Matter as any Body, and at the ſame Time wiſhes that much more could be known.

The principal Symptom of the firſt Stage of this Diſtemper, is a Kind of Light-Headedneſs, which makes the affected Sheep appear much wilder than uſual, when his Maſter or Shepherd, as well as a Stranger, approaches him. He bounces up ſuddenly from his Laire, and runs to a Diſtance, as though he were purſued by Dogs, &c. Theſe Actions ſeem to indicate that his Sight is affected: and I dare ſay, if his Eye-Balls were examined, they would appear inflamed.

In the ſecond Stage of the Diſtemper, the principal Symptom of the Sheep is his rubbing himſelf againſt Trees, Poſts, &c. with ſuch Fury as to pull off his Wool and tear away his Fleſh.

The diſtreſſed Animal has now a violent Itching in his Skin, the Effect of an highly inflamed Blood: but it does not appear that there is ever any cutaneous Eruption, or ſalutary critical Diſcharge. In ſhort, from all Circumſtances the Fever appears now to be at its Height.

The

The third and laſt Stage of this dreadful Malady ſeems to be only the Progreſs of Diſſolution, after an unfavourable Criſis. The poor Animal, as condemned by Nature, appears ſtupid, ſeparates from the Flock, *walks irregularly*, (whence probably the Name of this Diſeaſe, *Rickets*) generally lies, and eats little. Theſe Symptoms increaſe in Degree till Death, which follows a general Conſumption, which appears upon Diſſection of the Carcaſe; the Juices and even Solids having ſuffered a general Diſſolution, inſomuch that the Solids have no longer any of the good Properties of Fleſh, nor the Blood of its uſual Colour, &c.

I do not find that there is any preciſe Time from the firſt Symptoms of the Diſtemper to the Animal's Death; but apprehend that the Time of this Diſeaſe, like all of the conſumptive Kind, varies in inverſe Proportion to its Violence, whence in the human Species we talk of *ſlow* and *galloping* Conſumptions and Fevers.

I do not find, Sir, that this Diſtemper attacks one Sex rather than the other, nor lean Sheep rather than fat, nor *gelt* Sheep (as we call them in *Yorkſhire*) rather than *breeding* ones, although pregnant Animals are exempt from many other Diſeaſes: but of this laſt Circumſtance, I am not fully informed.

Mr. *Beal* believes himſelf to have made one Diſcovery, with Regard to this Diſtemper, which if *aſcertained*, is certainly very curious, and may lead to very important Diſcoveries.

I verily

I verily think the Fact may be depended upon as authentic ſo far as his Experiments go, however difficult, or even impoſſible it may be to account for it, on any natural Principles; and the Experiment may be repeated with very little or no Trouble, as often as a Sheep dies of this Diſtemper.

The intereſted Attention of this Gentleman Farmer eaſily perceived that the Head of the Sheep appeared the principal Seat of the Malady, which ſpread itſelf thence through the whole Body. He rationally thought, that by Diſſecting the Head of a Sheep dying of this Diſtemper, he might diſcover Something which would lead to the Cauſe, and perhaps Cure. He avers, that in Conſequence of this Thought, he diſſected the Heads of ſeveral Sheep thus dying, and in the Brain (or rather, I ſuppoſe, the Membranes adjoining) found, without one Exception, a Maggot, about one Fourth of an Inch long, and of a browniſh Colour. An intelligent Gentleman of *Bedfordſhire*, to whom I related this Story, ſuſpected that Mr. *Beal* might miſtake *grumous Blood* for a Maggot: but I apprehend him to be too attentive a Man to be thus groſsly miſtaken. Beſides, Mr. *Beal* was ſo exact in his Obſervations as to note that this Maggot was ſmaller at one End than the other, as far as I can remember.

I aſked Mr. *Beal*, "whether any other Farmers who had Sheep dying of this Diſtemper, obſerved this curious Phænomenon?" He anſwered me, that he ſpoke of his Diſcovery to ſeveral Sheep-Maſters, but he believed them

too inattentive to try any Experiments. They are perſuaded, that no Remedy can prove available, and therefore fix their Attention ſolely to the getting quit of the Flock which is ſeized by that Evil. It is certainly very deſirable, that Maſters of Sheep would command every one, which dies of this dreadful Diſtemper, to have its Head diſſected, in order to aſcertain, whether ſuch a Maggot as Mr. *Beal* diſcovered, be in each of them; alſo that they would kill the Sheep thus ſeized, if thought incurable, at different Stages, and note the Progreſs of this Maggot from the firſt Diſcovery which can be made of it; alſo the Seaſon of the Year in which the Sheep are thus ſeized, ſhould be noted. Finally, the Maggot if found ſhould be ſuffered to compleat its Progreſs in the Head of the dead Sheep, and this Progreſs be nicely watched, in order to trace out the Inſect, if ſuch be the Parent of this Evil.

You, Sir, muſt forgive me when I propoſe all theſe Experiments, although you may think me Viſionary in what follows: If the conſtant Exiſtence of this Maggot in the dying Sheep's Head be aſcertained, I ſhould conjecture the Inſect's Egg, whence it is produced, muſt be drawn up the Noſe by the Sheep while feeding, and by the various Veſſels of the Head lodged near the Brain; and that the Symptoms of the various Stages of this Diſtemper, may be the Effect of the various Stages of the Maggot's Hatching. In ſuch a Caſe, might not ſome Application to the Sheep's Noſe prevent the Malady at the critical Seaſon? I own however that the Circumſtance of this Malady's being confined to

ſome

ſome particular Breeds, ſeems at preſent utterly unaccountable; unleſs we ſhould ſuppoſe the eaſier Admittance of this Animalcule to depend on the larger Veſſels of the Head in ſome Breeds.

I will conclude, Sir, this long Letter, by obſerving that there is acknowledged a ſtrong Analogy betwixt Sheep and Deer. I am aſſured by ſeveral Perſons of Credit, that a Diſtemper exactly the ſame as *Rickets* in Sheep is found to have ariſen of late Years among Deer in ſome Parks *. How deſirable is it, that the Maſters of Parks ſhould inſtruct their Keepers to obſerve all the Symptoms of Deer thus dying, and compare them with thoſe of Sheep!

I am, Sir, with all proper Reſpect,

Your moſt obedient Servant,

T. COMBER.

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* Particularly in that of —— *Apprice*, Eſq; at *Waſhingley*, in this County.

FINIS.

G.R. III.
BRITISH MUSEUM